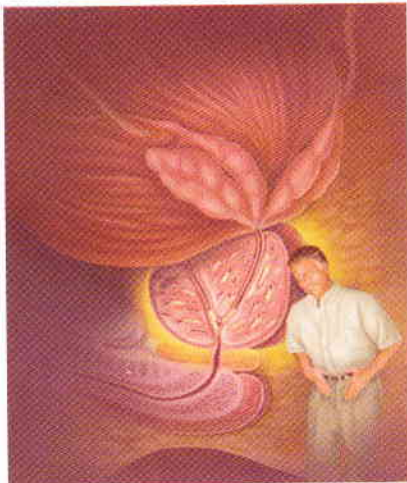
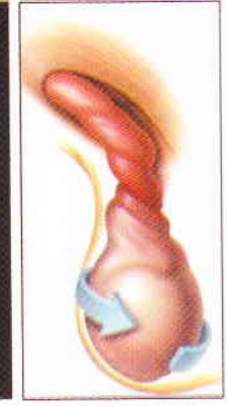


SELF ASSESSMENT of SURGERY cases

*New
edition*



MOHAMMED EL-MATARY
Lecturer of General Surgery
Ain Shams University

MATARY
SURGERY

© Copyright 2013 by Mohammed El-Matary

All rights reserved. No part of this book may be used or reproduced in any manner whatsoever without written permission, except in the case of brief quotations embodied in critical articles or reviews.

The publishers have made every effort to trace the copyright holders for borrowed material. If they have inadvertently overlooked any, they will be pleased to make the necessary arrangements at the first opportunity.

1st Edition 2007

2nd Edition 2009

3rd Edition 2010

4th Edition 2013

For further Information, visit our web site:
Www.Mataryonline.Net

**What do you think about this book? Or any other Mohammed El-Matary title?
Please send your comments to matary@mataryonline.net**

Dedication

*Allah the all merciful, I beg Thee
To accept this effort
For the soul of my mother
She was your gift for me*

Acknowled nt

The author wishes to acknowledge with gratitude:
Who had helped in preparation and production of this book
& who have contributed with his suggestions and ideas for
the new edition.

Special thanks to:

Fatma El-Gezawy, *Ain Shams University*

Kareem Mohamed Ali, *Ain Shams University*

Mohamed Noeman, *Ain Shams University*

Karim Darweesh, *Ain Shams University*

Preface

This book provides an update for medical students who need to keep abreast of recent developments. I hope also it will be useful for those preparing for postgraduate examination.

This book is designed to provide a concise summary of breast and endocrine surgery, which medical students and others can use as study guide by itself or with readings in current textbooks, monographs, and reviews.

Summaries of relevant anatomical considerations are included in every chapter, taking into account that this book is written primarily for those who have some knowledge of anatomy, physiology, biochemistry and pharmacology.

The author is extremely grateful to all the contributors for the high standard of the new chapters, and hopes that you, the reader, will enjoy going through these pages as much as he had.

M. El-Matary

Tips for solving clinical cases:

1. Read the case carefully.
2. Simplify the long sentences into simple points and extract the key words.
3. Don't be misled by extra details, focus on the key words.
4. Arrange your differential diagnosis from the most likely given the risk factors in the case to the least likely.
5. In the differential diagnosis try to mention which points are with the diagnosis & which are against given in the case not in general.
6. List your investigations starting by the least invasive the confirmatory tests.
7. Mention the significance and possible finding in each investigation.
8. Remember: you are treating a patient not a disease, so always consider the patient's general condition if compromised then deal with the local condition.
9. Don't rush for surgical treatment, if medical treatment is applicable mention it first.

Self-assessment

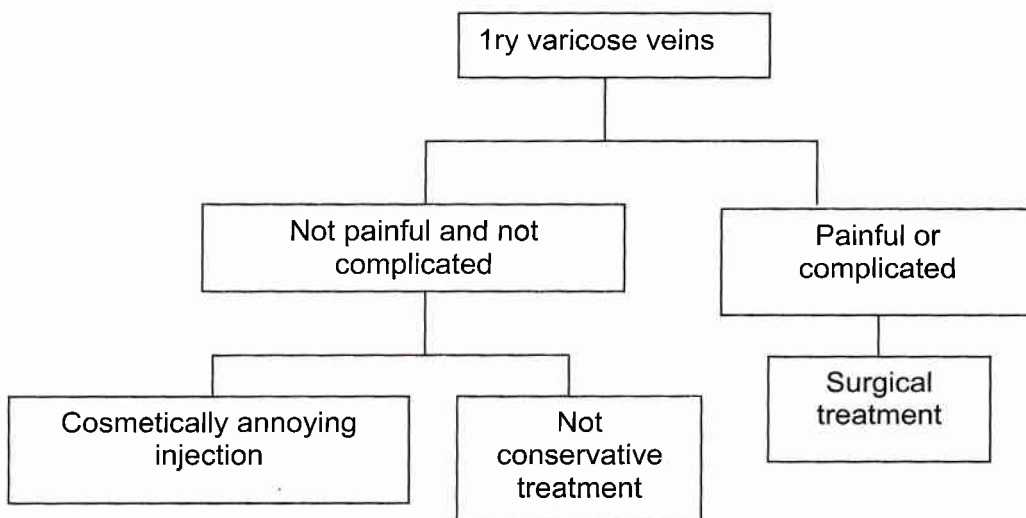
Volume II

1. A 45 year-old teacher presented to vascular clinic by pain in the right leg on prolonged standing, also she noticed distended veins in both legs more on the right side for the last 2 years. Last 3 months she began to have an erythematous itchy patch. On examination, there were multiple varicosities on medial side of thigh and leg with round area of eczema below right knee. Lt. side showed only minute varicose venules. On cough there was a thrill over right and left saphenofemoral junction.

Questions

- 1- What is your diagnosis?
- 2- What other points in examination would you consider?
- 3- What is the treatment for each side?
- 4- Mention complications of such condition if untreated?

➤ Hint:



Self-assessment

Volume II

Answers

1- This is a case of primary varicose veins of both lower limbs affecting long saphenous veins and other tributaries complicated by eczema on right side:

- **Primary:** teacher (prolonged standing), no obvious cause, thrill on both saphenofemoral junction
- **In distribution of long saphenous:** as it affects medial side

2- Points of examination that I would consider:

A- General:

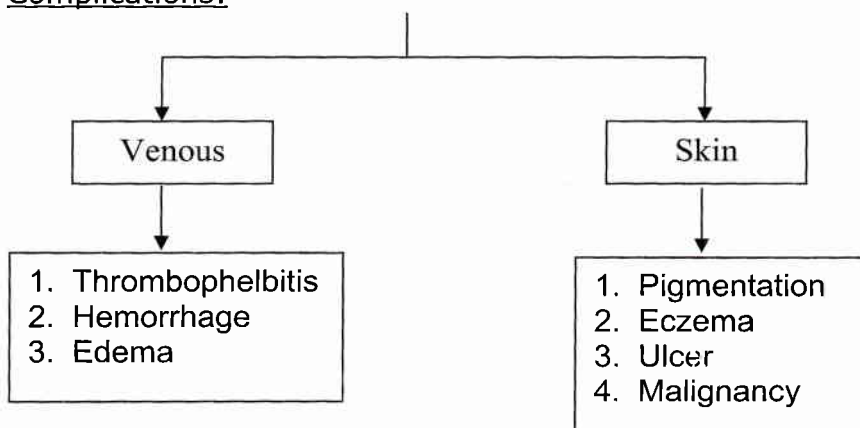
- 1- Precordial examination, blood pressure → A-V fistula
- 2- Flat foot, kyphosis, viscerotosis → mesenchymal weakness
- 3- Scar of previous operation, dilated veins crossing groin, abdominal or pelvic swelling → secondary varicose veins.

B- Local:

- Inspection: for complications
- Palpation: fascial defect, associated arterial diseases, complications
- Percussion: Swartz test
- Special test: Trendlenburg, multiple tourniquet, modified Perthe's tests

3- The left side is not painful so requires either conservative treatment (if cosmetically not annoying the patient) or injection (is cosmetically annoying the patient) while the right side is painful and complicated by eczema so requires triple ligation or stripping according to result of according to result of tourniquet tests

4- Complications:



Self-assessment

Volume II

2. A 30-year old female presented with painful fingers. By history: the condition is paroxysmal and periodic (mainly during winter). During the attack, the fingers became white then blue then finally red with pain more in distal phalanges. She smokes 15 cigarettes per day and takes propranolol for control of manifestation of mitral valve prolapse. On examination: no abnormalities detected in neck and upper limbs examinations, and all pulses are felt through upper limbs

Questions

- 1- What is your diagnosis
- 2- Describe the cause of this sequence of color changes
- ~ How can you manage this case?

KEY POINTS

- 30 yrs ♀
- Painful fingers
- Mainly during cold
- Smoker
- On propranolol ttt
- No abnormaliites on examination

Self-assessment

Volume II

Answers

1- This is a case of Raynaud's disease without manifestations of complications:

- Raynaud's disease: affecting upper limbs with sequence of color changes occurring on exposure to cold
- Primary:
 - Type of patient (20-40) years old female
 - Bilateral and symmetrical affection
 - No trophic changes
 - No detectable cause

2- Pallor is due to arteriolar and capillary VC → accumulation of metabolites → capillary VD → filling of capillaries with deoxygenated blood → cyanosis, Then → further accumulation of metabolites leads to arterial VD → reactive hyperaemia → Rubber

3- This case will benefit from conservative treatment:

- a. Care of the patient:
 - Stop smoking
 - Stop propranolol (non-selective beta blocker → VC)
 - Avoid cold weather
 - Treat anemia if present
- b. Care of the hand:
 - Good hygiene of hands
 - Hand exercise
- c. Drugs:
 - Alpha blocker (vasodilator)
 - Baby aspirin (not beta blocker)
 - Calcium channel blocker

Hint:

During problem solving question answering, search for predisposing / precipitating factors of the condition you suspect in the case, if you find any of them mention their avoidance as the 1st step in management.

Self-assessment

Volume II

3. A 50-year old man presents to ER complaining of severely painful non-healing wound in right leg, the wound was made by minor trauma and is enlarging rather than healing

On examination: there is 4 X 5 cm punched out ulcer in right leg which appeared cooler than the left, no edema, no varicose veins.

Motor and sensory examinations showed improvement

Questions

- 1- What is the most likely diagnosis?
- 2- What points in history would you consider to ask about?
- 3- What investigations would you request?
- 4- What are the treatment options?

KEY POINTS

- 50 yrs ♂
- Punched out non-healing
- Ulcer on Rt. leg
- R. leg is cooler than Lt.
- No associated varicosities

D.D. of leg ulcers

1. Venous ulcers
2. Ischemic ulcers
3. Inflammatory ulcers
4. Chronic traumatic ulcers
5. Neoplastic ulcers
6. Neurotrophic ulcers
7. Blood diseases (sickle cell disease)
8. Rheumatoid arthritis

Self-assessment

Volume II

Answers

1- The most likely diagnosis is chronic ischemia of the right lower limb complicated by ischemic ulcer.

- Ischemic ulcer:
 - Old age (atherosclerosis)
 - Non-healing ulcer made by minor trauma
 - Severely painful
 - Punched out edges
 - Right leg is cooler than left.

2- By history you must search for:

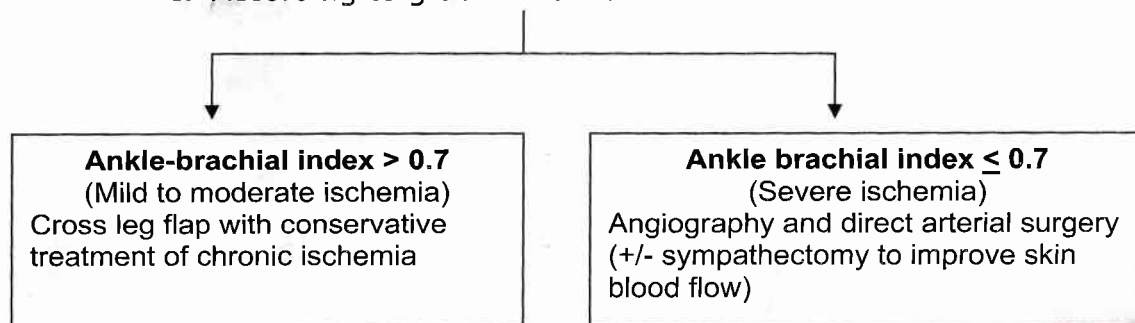
- a- Claudication pain: if present → claudication distance, period of rest
- b- Rest pain: if present → severe ischemia
- c- Other system affection e.g. angina pectoris, TIA, impotence, post-cibal abdominal angina.
- d- History of DVT to exclude postphlebotic limb (50% not associated with varicose veins).

3- Investigations required:

- a- To detect complications of chronic ulcer:
 - Biopsy for fear of malignancy
 - Swab for direct film, culture and sensitivity
- b- To confirm and stage chronic ischemia
 - Doppler / Duplex
 - Angiography (mainly preoperative)
 - MRA: expensive
- c- To evaluate other systems: CBC, FBC, KFTs, LFTs, ECG and CXR

4- Answer to question 4:

- a. First of all: admission, analgesia (up to morphia), LMW heparin
- b. Then the mentioned investigations should be done
- c. According to grade of ischemia:



Self-assessment

Volume II

4. Following pelvic surgery, the patient reports numbness along the medial side of the left thigh with weakness of adduction of left thigh. No other motor or sensory deficits have been reported

Questions

1- What is likely the diagnosis?

2- How can you manage?

Hint

➤ Prognosis of iatrogenic nerve injury depends on:

- a- Mechanism of injury
- b- Delay until evaluation is performed
- c- The nerve injured
- d- The distance between injury and end organ denervated

Self-assessment

Volume II

Answers

1- This is a case of obturator nerve injury:

- Possible history of trauma
- Neural deficit localized to distribution of obturator nerve

2- management of iatrogenic nerve injury:

A- When the patient wakes from surgery with significant neural deficit, immediate elevation is recommended

B- Main mechanisms of iatrogenic nerve injury are:

- | | | |
|---------------------------|---|-----------------------|
| 1) Transection | } | Immediate exploration |
| 2) Constriction by suture | | |
| 3) Cauterization | } | Conservative measures |
| 4) Retractor injury | | |

So consultation of operating surgeon is recommended to determine mechanisms of injury

C- From point A and B

- 1) If there is complete nerve palsy or transaction and constriction of nerve by suture can not be excluded, immediate exploration of nerve is recommended
- 2) If there is partial palsy or mechanism is likely to be stretch or compression, conservative management is recommended with serial examination and electrodiagnostic studies
- 3) If no improvement occurs after three months, operative repair is recommended

NB.

High resolution MRI can be helpful in diagnosis and detection of site of nerve injury

Self-assessment

Volume II

5. A young boy has been stabbed in right forearm, he has difficulty in flexing his wrist and pronating the forearm along with loss of sensation over the lateral fingers on the palmar surface

Questions

- 1- What is the diagnosis?
- 2- How can you manage this patient?

Hint

Median nerve and brachial artery can be injured by stab wounds to cubital fossa

Self-assessment

Volume II

Answers

1- This is a case of median nerve injury in forearm:

- Neural deficit localized to distribution of median nerve
- Median nerve is liable to injury in stab wounds of cubital fossa

2- This is a traumatized patient:

- Search for life-threatening injuries (by history and examination)
- If any is present treat it
 - a- Stop any external bleeding and check for internal ones
 - b- Monitor the vital data of patient, his pupil response and his mouth tone.
 - c- Treat any other injury produced in the same stab especially vascular injuries (brachial artery injury is a common association of median nerve injury in stabbing of forearm)
 - d- Mark the cut ends of the nerve for delayed repair
 - e- Close the wound without tension
 - f- After complete decontamination, delayed repair for the injured median nerve can take place.

Self-assessment

Volume II

6. 75 year old woman brought to ER as she had a fall in street, by history she slipped and stretched her right hand to save herself, but she also had a forehead laceration

Now she complains of painful swollen right wrist, she is hypertensive, diabetic and has history of heart attack with medications of these diseases including aspirin. On examination: no affection of vital signs other than tachycardia. Tenderness elicited over lumbar vertebrae and she told it have been painful for the last 20 years. Her right wrist was tender, swollen with no special deformity. X-ray was urgently requested

Questions

- 1- What is the most probable diagnosis?
- 2- Describe deformities you expect on X-ray?
- 3- How can you manage?

KEY POINTS

- 75 yrs ♀; fell on out stretched hand
- Hypertensive, DM, history of Ht. attack
- Lumbar pain 20 yrs → osteoporosis
- Tender Rt. wrist

Self-assessment

Volume II

Answers

1- This lady has distal radial fracture (mostly Colle's fracture) of her right upper limb:

- Female, old age with evidence of osteoporosis (tender lumbar vertebrae)
- Fall on outstretched hand
- Painful, tender swollen right wrist

2- Deformities expected in Colle's fracture are fracture line with:

- a- Radial shift
- b- Radial tilt
- c- Dorsal shift
- d- Dorsal tilt
- e- Upward impaction

3- This is a traumatized patient:

- a- Search for life threatening conditions (by history and examination), if any is present treat it
- b- Stop external bleeding and check for internal ones
- c- Monitor vital data of patient, pupil response, and muscle tone (especially with history of head injury)
- d- Treat any injury produced by the same accident (e.g. Scaphoid fracture, median nerve injury, radial artery injury)
- e- Definitive treatment of Colle's fracture:
 - 1- Closed reduction under general anesthesia
 - 2- Fixation by below elbow cast for 6 weeks
 - 3- Physiotherapy from 1st day to prevent sudden Sudek's atrophy

Self-assessment

Volume II

7. An 18 year-old male presented to ER as a victim of road traffic accident, he is unconscious, he makes incomprehensible sounds and opens his eyes to pain, his right arm extends to painful stimulus while he could localize area of painful stimulus on left arm.

Questions

- 1- What is the Glasgow coma score (GCS)? What is the patient's score?
- 2- What is the significance of GCS?

Self-assessment

Volume II

Answers

GSC

1. Composition:

	Eye opening	Best side motor response	Best verbal response
1	None	None	None
2	To pain	Extension to pain	Incomprehensible sounds
3	To speech	Flexion to pain	Inappropriate words
4	Spontaneous	Withdrawal from pain	Confused speech
5	---	Localizes pain	Oriented
6	---	Obeys verbal commands	-----

2- Assessment:

- a- Patients are assessed according to their best responses
- b- The score is summed to give an overall value from 3 (The worst) to 15 (the best)

This patient's GCS is 9

- Eye opening to pain = 2
- Localized pain = 5
- Incomprehensible sounds = 2

3- Significance:

- A- The main value of GCS is monitoring neurological status of a patient by repeated assessment every 15 minutes. A fall of 2 or more in 15 minutes indicates a potentially significant deterioration in neurological condition
- B- The absolute values are also helpful in initial assessment e.g.
Coma is diagnosed if $GCS \leq 8$
- C- Repeated every 15min → if deteriorable $> 2 \rightarrow$ hidden head injury.

Self-assessment

Volume II

8. 17 year-old male brought to ER by history of head trauma by a thrown stone hitting left side of head 1 hour ago. After trauma, he did not lose consciousness, was able to walk and vomited 3 times. Then became drowsy. On examination: temp. 36.7 C, pulse = 60 bpm, BP = 180 / 20 mmHg. He lost consciousness during examination. He could not open his eyes even to pain. No motor or verbal response made by him at all even with painful stimulation. He has a boggy swelling over the left temple

Questions

- 1- What is your diagnosis?
- 2- How can you explain the values of his vital signs?
- 3- What is the management of this case?

➤ Injury to blood sinus can be considered due to rapid deterioration

KEY POINTS

- 17 yrs ♂
- Head trauma 1 hr ago
- Vomited 3 times
- Drowsiness
- Bradycardia 60 bpm
- Hypertension 180/120 mmHg
- Boggy swelling over Lt. temple
- GCS 3/15

Self-assessment

Volume II

Answers

- 1- This patient has brain compression as a complication of left-sided extra-dural hemorrhage with Glasgow coma score 3 /15
 - Extra-dural hemorrhage:
 - History of head trauma
 - Boggy swelling in left temple
 - Brain compression:
 - Drowsiness, vomiting, after the accident
 - Coma with cushing reflex
 - GCS 3/15
 - No verbal-no motor-no eye opening responses even to painful stimuli
- 2- vital signs of this patient
 - temp = 36.7 C is considered normal
 - Bradycardia and hypertension in patients with increase intracranial tension are expected and called "Cushing reflex"

➤ Cushing triad: bradycardia – hypertension – bradypnea (slow breathing) occurs also in patients with ↑ ICT

- 3- As polytraumatized patient:
 - a. Primary survey:
 - Airway
 - Breathing
 - Circulation: control bleeding by local compression
 - Disability: any other fractures should be splinted.
 - b. Secondary survey:
 1. Exposure.
 2. Head to toe examination
 3. History of any AMPLE
 4. Urgent investigations after basic life support
 - CT scan (of choice) → biconvex appearance of EDH
 - Plain X-ray → skull, chest & cervical spine
- Definitive treatment:
 - 1) General → • shave the scalp • GA
 - 2) Scalp incision → Question mark incision
 - 3) Burr hole in temporal fossa then enlarged by bone nibbling.
 - 4) Hematoma is removed by suction irrigation.
 - 5) Control the bleeder.

Self-assessment

Volume II

9. A 30 year-old male presented to ER with left sided abdominal pain that woke him from sleep, he vomited 3 times, he passes urine last hour. Bu history: the pain was 7 hour duration, constant, radiating to groin. On examination: temp = 37 C, BP = 120 / 75 mmHg. There is marked left loin tenderness

Questions

- 1- What is most likely diagnosis?
- 2- What urgent investigations would you request?
- 3- What are the indications for admission of this patient?
- 4- What is the management of this case?

KEY POINTS

- 30 yrs ♂
- Lt. sided abdominal pain
- N & V
- Loin to groin pain
- Normal temperature & BP
- Lt. loin tenderness

Self-assessment

Volume II

Answers

- 1- This is a case of left-sided renal colic
 - young adult male
 - Severe abdominal pain (waken him from sleep – vomiting) radiating to groin
 - Left loin tenderness
 - No constitutional manifestations
- 2- urgent investigations
 - a- Urine analysis: crystals, hematuria, exclude presence of pus
 - b- KUB: 90% of renal stones will be visible
 - c- U/S: stones, renal parenchymal thickness
- 3- Indications of admission:
 - Calculus anuria
 - Pain not controlled by analgesia
 - Solitary kidney
 - Complications e.g. sepsis, renal failure
- 4- During the attack:
 - i. Potent analgesics
 - ii. Antispasmodics
 - iii. Prophylactic antibiotics

► Definitive treatment:-

 - A- Conservative management (if <1cm):
 - Ample of fluids.
 - Antispasmodics
 - Acidification of urine
 - Antibiotics
 - follow up
 - B- Active management according to site & size of stone

Self-assessment

Volume II

10. A 60 year old man presents to urology outpatient clinic with history of urinary frequency, nocturia and post-micturation dribbling. On examination: no findings in general and abdominal examinations. DRE revealed enlarged smooth prostate with rectal mucosa mobile over it. PSA was done and was 7 ng/ml (normal < 6.5 ng/ml for this age)

Questions

- 1- What is the most likely diagnosis? & why?
- 2- How to manage this case?

KEY POINTS

- 60 yrs ♂
- Prostatism: frequency, nocturia & post-micturation dribbling
- Abdominal examination: -ve
- DRE:
 - Enlarged smooth prostate
 - Mobile rectal mucosa

Self-assessment

Volume II

Answers

1- The most likely diagnosis is BPH

- Old male
- Prostatism
- Smooth prostate with mobile rectal mucosa
- PSA elevation is not diagnostic for cancer prostate because:
 - it has high false negative and false positive results, so it is used only for follow-up
 - It is not elevated in PBH

2- Management:-

A. Investigations:

1. Transrectal U/S → size & extension of the prostate.
2. KFTs → for affection of kidneys (Back pressure)
3. IVU → hydroureter & hydronephrosis (Back pressure)
4. Uroflowmetry → maximum for rates less than 15ml/sec = bladder neck obstruction

B. Treatment:

- ▶ This patient can be managed conservatively as long as there are no complications:
 1. Avoid precipitating factors of acute retention (5w).
 2. α blockers e.g. prazosin
 3. 5 α blockers inhibitors (proscar)
- ▶ If there is failure of medical TTT → Surgical TTT:
 1. Endoscopic surgery:
 - TURP (Trans Urethral Resection of the Prostate)
 - VLAP (Visual Laser Ablation of Prostate by Holmium laser)
 2. Open surgery:
 - Transvesical prostatectomy (Freyer).
 - Retropubic prostatectomy (Millin)

Self-assessment

Volume II

11. A 60 year-old male complains of left loin pain for 2 months, he is hypertensive, diabetic and heavy smoker. On examination: positive findings are BP = 160/100 mmHg
Urine analysis shows RBCs count of 35 / HPF
U/S showed solid central mass in left kidney with no pelvicalyceal dilatation

Questions

- 1- What is the likely diagnosis?
- 2- What is the importance of genitalia examination in this patient?
- 3- Mention your further work up for this patient & lines of treatment?

KEY POINTS

- 60 yrs ♂
- Smoker
- HTN & DM
- Hematuria
- Solid mass in Lt. kidney

Self-assessment

Volume II

Answers

- 1- The most likely diagnosis is renal cell carcinoma of the left kidney
 - Old male
 - Smoke and hypertensive
 - Hematuria 35 / HPF
 - Solid mass by US
- 2- This patient may have a secondary varicocele on left side if the tumor obstructs the left renal vein.
- 3- ► Further work up:-
 - A. For diagnosis
 - Spiral CT
 - Ascending pyelogram
 - Renal angiography
 - B. For staging
 - CXR
 - Bone scan
 - Pelvic U/S
 - C. Pre-operative preparation
 - CBC → anemia, high ESR
 - KFTs, LFTs, FBS, CXR, ECG
- Treatment:
 - 1) Radical nephrectomy: remove
 - Upper 1/3 of the ureter
 - Perinephric fat
 - Renal capsules
 - Draining LNs
 - 2) Post-operative IL-2

Self-assessment

Volume II

12. A 75-year old female brought to ER after a fall; she mentioned that her foot caught the edge of the carpet. She had severe pain in right hip and can not walk

On examination: she was sweaty, irritable with normal vital signs

Her right lower limb was kept externally rotated and adducted

No active movement, and passive movement is restricted, after reviewing x-ray film of right hip, the orthopedic surgeon decided an operative management. On 4th day postoperative, patient complained of generalized abdominal pain and constipation for 1 day without passing flatus. BP = 110/70, pulse 78 bpm.

Generalized abdominal tenderness resonance on percussion, no abdominal sounds

Questions

- 1- What is the diagnosis of 1st condition? What is the most important predisposing factor?
- 2- What is the operative management decided to this case?
- 3- What is the diagnosis of 2nd condition? What is the predisposing factor?
- 4- How can you manage this case?

Self-assessment

Volume II

Answers

1- The 1st condition is unimpacted fracture neck of femur

- Female old age
- Characteristic mechanism of injury
- Inability to walk
- Position of lower limb (external rotation with adduction)

Most important predisposing factor is post-menopausal osteoporosis

2- operative management for this case is hemiarthroplasty as the fracture is unimpacted (adduction) in old age

3- The second condition is intestinal obstruction, after exclusion of mechanical causes by x-ray abdomen and barium enema the diagnosis will be colonic pseudoobstruction

Its predisposing factor in this case:

- old age
- Heavy trauma followed by orthopedic operation

4- if any mechanical cause is present, it should be treated
if no mechanical causes could be detected and diagnosis settled as pseudo-obstruction, the condition is managed conservatively:

- a- Ryle, IV line and fluids
- b- Monitoring of vital data
- c- Decompression of colon only if there is risk of rupture

Self-assessment

Volume II

13. A 78-year-old man presented with difficulty in passing urine. By history: the condition started 6 months ago with weak forked stream and nocturia, and is progressive. On examination: there is palpable supra-pubic mass, dull on percussion. DRE revealed enlarged smooth prostate with preserved median sulcus. KFT was done (urea 72 mg/dl / creatinine 7 mg/dl)

Questions

- 1- What is the diagnosis?
- 2- How can you manage?
- 3- Which features on DRE can make you suspicious of cancer prostate?

KEY POINTS

- 78 yrs ♂
- Difficulty of passing urine
- History of prostatism
- Dull suprapubic mass
- DRE → smooth prostate
→ median sulcus preserved } = Benign prostate
- Impaired kidney functions → back pressure

Self-assessment

Volume II

Answers

- 1- This is a case of chronic urinary retention caused by BPH, complicated by renal failure
 - Chronic urinary retention:
 - Difficulty in passing urine for 6 months
 - Palpable suprapubic mass, dull on percussion
 - The condition is painless
 - BPH:
 - manifestations of prostatism
 - DRE reveals a benign enlargement of prostate
 - Renal failure:
 - Deteriorated renal failure
- 2- treatment
 - a- treatment of chronic retention: by self-retaining Foley's catheter
 - b- Follow up of renal function:
 - if renal function tests improve: surgical resection of BPH to prevent recurrence of renal impairment
 - If no improvement of renal function: replacement therapy (dialysis or transplantation) + surgical treatment of BPH
- 3- Features suggesting malignant prostate on DRE:
 - Hard swelling
 - Asymmetrical prostate
 - Non-preserved median sulcus
 - Non-preserved notch between prostate and seminal vesicles
 - Fixation of rectal mucosa to prostate

Self-assessment

Volume II

14. A 30-year-old man presented to surgical outpatient clinic with 8 week history of anal pain on defecation, it lasts an hour after defecation. He has history of constipation for the last 4 months. On examination: no pallor, no findings on abdominal examination, but on examination of anus, there was a linear ulcer at 6 o'clock position, the severe pain prevented DRE.

Questions

- 1- What is the diagnosis?
- 2- What are other diseases that can cause perianal pain?
- 3- What is your management?

KEY POINTS

- 30 yrs ♂
- Anal pain
- History of constipation
- Linear ulcer in posterior midline

Self-assessment

Volume II

Answers

1- This man has an anal fissure:

- pain on defecation that lasts for 1 hour
- Constipation for 4 months
- Anal linear ulcer at 6 o'clock position (midline posteriorly)

2- Causes of perianal pain are:

- a. Anal fissure.
- b. Perianal suppuration.
- c. Prolapsed strangulated piles (complicated piles).
- d. Acute perianal hematoma.
- e. Carcinoma of the anus (late malignancy).
- f. Proctalgia fugax (idiopathic).
- g. Crohn's disease

3- Management

a- Investigations:

- No need for investigations as the condition is diagnosed clinically only as single posterior fissure is present with a well-recognized cause (chronic constipation)
- Pre-operative investigations if surgical treatment is decided: CBC, FBC, CXR, LFT, KFT
- Intraoperative → PR, proctoscope & sigmoidoscope to exclude chronic specific inflammation or malignancy

b- Treatment:

- As pain is of 8 wks duration, this suggests a chronic anal fissure
- Fissurectomy & lateral sphincterotomy
- Followed by life style changes:
 - 1. High fiber diet
 - 2. Laxatives
 - 3. Sitting in a warm bath after using the toilet

Self-assessment

Volume II

15. A 55-year-old man complains of intermittent sharp abdominal pain, he has no passes stool or flatus for 5 days, he has a history of chronic constipation. On examination: temp 38 C, pulse 100 bpm. There is gross abdominal distension and tenderness most marked in left iliac fossa.

Questions

- 1- What is the most likely diagnosis?
- 2- How can you manage?

- General condition → Toxemia (gangrenous).
- If not try conservative → Rectal tube

KEY POINTS

- 55 yrs ♂
- Sharp colics
- Absolute constipation of 5 days duration
- History of chronic constipation
- Examination
 - Fever
 - Tachycardia
 - Abdominal distension
 - Lt. iliac fossa tenderness

Self-assessment

Volume II

Answers

1- This is most likely a case of sigmoid volvulus

- old male
- Absolute constipation
- Distension
- Tenderness on left iliac fossa
- Chronic constipation

2- management

a- Investigations

1. For diagnosis

▪ Plain X-Ray of the abdomen:

- **Omega sign (Ω)** : There will be a very big loop distended with gas & occupying nearly the whole abdomen.

▪ Barium enema:

- **Ace of Spade deformity (♠)**: (distended rectum) with arrest of barium at rectosigmoid junction.

2. For complications:

- CBC: anemia.
- KFTs: pre-renal failure.
- Serum electrolytes.

b- Treatment

This is a late condition with possible complications (fever 38 c), so no time for conservative treatment and immediate surgical exploration and repair (after preoperative preparations) should take place

- urgent laparotomy
 - If colon is viable and short → fix to posterior abdominal wall
 - If colon is gangrenous → excision of gangrenous part + Mickuliz or Hartman's method
 - If colon is long → excision of part of colon + Mickuliz or Hartman's method

Self-assessment

Volume II

16. A 72-year-old female presented to ER with 3 days history of left sided abdominal pain progressive in course, she vomited for several times, but passed stool yesterday she has along history of constipation with dull aches in left iliac fossa. On examination: temp = 38 C, pulse 100 bpm , BP = 110 / 70 mmHg

There is tenderness, rigidity and rebound tenderness in left iliac fossa.

Questions

- 1- What is most likely diagnosis?
- 2- What is the initial treatment for this case?
- 3- What are the other possible complications of this case?

KEY POINTS

- 72 yrs ♂
- Lt. sided abdominal pain
- History of chronic constipation
- No absolute constipation
- Fever, tachycardia
- T, R & RT in Lt. iliac fossa

Self-assessment

Volume II

Answers

1- This is most likely a case of colonic diverticulosis complicated by acute diverticulitis

- old age
- Long history of constipation with dull-aches in left iliac fossa
- Left sided abdominal pain for 3 days
- No absolute constipation
- Fever and tachycardia
- Tenderness, rigidity and rebound tenderness in left iliac fossa

2- Treatment of this case:

a- Conservative treatment

- 1- Semi-sitting position
- 2- Ryle IV – line and fluids
- 3- Parenteral analgesia and antibiotics
- 4- Monitoring of: vital signs, vomiting, urine output

b- if the condition improves → high fiber diet and anti-spasmodics

- If the condition does not improve or worsens → reassess the patient

Hint:

In complicated cases we treat the complication 1st, then we should consider treatment of the original (pathology)

3- Complications

a. Acute diverticulitis:

- Perforation
- Fistula formation
 - Vesicocolic
 - Vagino-colic

b. Chronic diverticulitis

→ colonic stricture & adhesive intestinal obstruction

c. B/R due to erosion of blood vessels at the neck of a diverticulum by inspissated faeces.

★★ It is NOT PRECANCEROUS

Self-assessment

Volume II

17. A 40 year-old-man presented with intermittent bleeding per rectum for the last 2 months, the blood is bright red, on surface of stool. There is itching, around anus, but no anal pain.

On examination: General, abdominal and anal digital rectal examination revealed no abnormality other than perianal scratch marks

Questions

- 1- What is the most likely diagnosis?
- 2- What investigations would you request?
- 3- What treatment option do you have?

KEY POINTS

- 40 yrs ♂
- B/R for 2ms
- Bright red blood on surface of stools
- Itching + scratch marks
- Local examination irrelevant

Self-assessment

Volume II

Answers

- 1- This is a case of uncomplicated 1st or 2nd degree internal piles
 - intermittent bleeding per rectum
 - bright red blood on stool surface
 - Pruritis ani and peri-anal scratch marks
 - No anal pain
- 2- piles is a clinical diagnosis, but investigations are required to prove/ exclude causes of secondary piles:
 - a- Sigmoidoscopy should be done and any found masses should be biopsied
 - b- Pelvi-abdominal US
 - Pelvic or abdominal masses
 - Hepatic periportal fibrosis
- 3- Treatment options for 1st and second degree piles
 - a- Primary
 - **For first and second degrees:**
 - Conservative TTT:
 1. High fiber diet
 2. Small doses of laxative.
 3. Suppositories that contain decongestant.
 - Injection sclerotherapy.
 - Rubber band ligation.
 - Photocoagulation:
 - Cryosurgery (not done now):
 - **For third and fourth degrees:**
 - Hemorrhoidectomy: excision of the hypertrophied cushions with the overlying redundant skin.
- b- Secondary
 - Treatment of the cause

➤ **Hint:**

Piles is most often a primary condition, but if secondary it may be the key for diagnosis of serious conditions

Self-assessment

Volume II

18. A 65-year-old man has lethargy and shortness of breath on walking for 6 weeks. He has a history of weight loss and reduced appetite for the last 2 months. On examination: he is pale and cachectic. Abdominal examination revealed non-tender solid swelling in right iliac fossa. No findings on DRE

Questions

- 1- What is most likely the diagnosis?
- 2- What investigations would you request?
- 3- What are the treatment options for this case?

KEY POINTS

- 65 yrs ♂
- Lethargy & shortness of breath
- Cachexia
- Swelling in Rt. Iliac fossa

D.D. of mass in Lt. iliac fossa

- Look DD book

Self-assessment

Volume II

Answers

- 1- The most likely diagnosis is cancer caecum complicated by anemia:
 - Old man
 - Loss of appetite and loss of weight
 - Manifestations of anemia (lethargy, dyspnea and pallor)
 - Cachexia
 - Swelling in right iliac fossa
- 2- Required investigations for this case are:
 - I. For diagnosis:
 - Sigmoidoscopy:
 - Barium enema:
 - II. For staging:
 - Abdominal U/S or CT scan.
 - Chest X-Ray.
 - Intravenous urogram: If the tumor is expected to be close to the ureter.
 - III. For preoperative preparation:
 - CBC: Microcytic hypochromic anemia.
 - LFTs.
 - IV. For follow up:
 - Tumour Markers: Carcino Embryonic Antigen (CEA) → it is not specific & is of prognostic rather than diagnostic value.
- 3- Treatment
 - a- Preoperative preparation with improvement of the general condition
 - b- According to stage of disease (determined by investigations)
 - i- Operable cases: right hemicolectomy
 - ii- Inoperable cases: side to side ileotransverse anastomosis

N.B.

- Colonoscopy is essential as 7% is multicentric

Self-assessment

Volume II

19. A 70 year old man presents with 3 months history of diarrhea (4 loose motions per day). By history: the stool was mixed with blood in some times. He has a history of weight loss and reduced appetite for that duration. His father died from cancer at the age of 55 years. On examination: there were no abdominal masses or tenderness and no findings on DRE, but there was an enlarged left supra-clavicular LNs. Sigmoidoscopy showed normal rectal mucosa with a sessile mass occupying most of circumference of rectum

Questions

- 1- What is the most likely diagnosis?
- 2- What other investigations would you request?
- 3- Describe the main lines of treatment

KEY POINTS

- 70 yrs ♂
- 3 ms history of diarrhea (short duration)
- Blood mixed stools
- Wt. loss & ↓ appetite
- Family history of colon cancer
- Free abdominal examination
- Enlarged Lt. supraclavicular LNs
- Sessile mass in the rectum

Self-assessment

Volume II

Answers

- 1- The most likely diagnosis is cancer rectum with wide spread lymphatic metastasis
 - Old man
 - Diarrhea and occasional bleeding per rectum
 - Weight loss and loss of appetite
 - Possible positive family history
 - Enlarged left supra-clavicular LNs
 - Sessile mass on sigmoidoscopy
- 2- Required investigations are: (Mention the findings in details)
 - I. For diagnosis:
 - Sigmoidoscopy:
 - Barium enema:
 - II. For staging:
 - Abdominal U/S or CT scan.
 - Chest X-Ray.
 - Intravenous urogram: If the tumor is expected to be close to the ureter.
 - III. For preoperative preparation:
 - CBC: Microcytic hypochromic anemia.
 - LFTs.
 - IV. For follow up:
 - Tumour Markers: Carcino Embryonic Antigen (CEA) → it is not specific & is of prognostic rather than diagnostic value.
- 3- In this case, there is an extensive lymphatic spread (enlarged left supra-clavicular LNs) so the case is considered inoperable and treated by proximal colostomy after elevation of general condition

N.B.:

Radiotherapy should be tried in cancer rectum as it shows partial response

➤ Hint:

If the condition is specified (e.g. inoperable case) specify your answer (i.e. do not mention treatment as it is) (operable and inoperable)

Self-assessment

Volume II

20. A 22-year-old female presented to ER with lower abdominal pain of one day duration and progressive course. She vomited twice and was not able to eat or drink for the last day. She is on day 10 of her cycle. She has a past history of sexually transmitted disease treated with antibiotics. On examination: temp 38°C. There is lower abdominal tenderness and rebound tenderness localized to right iliac fossa. TLC was done and was 16000 / cm

Questions

- 1- What is the DD of this case?
- 2- How can you manage?

➤ **Consider the most relevant DD first & mention why?**

1. **Acute appendicitis:**

- Young age
- Lower abdominal pain
- Nausea, vomiting & ↓ appetite
- Fever of 38°C (low grade) • ↑ TLC
- Lower abdominal tenderness & rebound tenderness

2. **Acute PID:**

- Young age • Sexually active
- Fever • ↑ TLC
- Lower abdominal tenderness & R.T.

3. **Complicated ovarian cyst.**

4. **Ectopic pregnancy** (although she is on day 10, but you should be ectopically minded).

5. **Crohn's disease:**

- Ask about history of similar attacks
- Autoimmune diseases are more common in females

Self-assessment

Volume II

Answers

1- DD of right iliac fossa pain:

- Acute appendicitis
- Mickle's diverticulitis
- Non-specific mesenteric adenitis
- Crohn's disease
- Ectopic pregnancy
- PID
- Complicated ovarian cyst
- Right ureteric calculi

2- The most likely diagnosis of this case is either:

A- PID:

- One day duration of pain
- Anorexia, fever and leucocytosis
- History of STD

c- Acute appendicitis:

- One day duration of pain
- Anorexia, fever and leucocytosis
- Tenderness and rebound tenderness

We should exclude / prove PID by TVUS and high vaginal swabs
If these investigations are not conclusive, laparoscopy should be done:

- if gynecological problem: diagnose and deal with if possible
e.g. drainage of pelvic abscess
- If there is an inflamed appendix, it could be removed
laparoscopically

Self-assessment

Volume II

21. A 12-year-old boy presented to ER with painful, swollen and warm left knee for 2 days, he also feels unwell, there is no history of trauma, on examination,, temp = 38.5 C. Active and passive movements of left knee were limited due to sever pain

Questions

:

- 1- What is the most likely diagnosis?**
- 2- How can you manage?**

Self-assessment

Volume II

Answers

1- The most likely diagnosis is acute septic arthritis of left knee:

- Swollen, warm and painful left knee with loss of active and passive movements
- No history of trauma
- Fever = 38.5 C

2- Management

a- Investigations:

- Laboratory
 - ↑ TLC. ↑ ESR and CRP +ve.
 - **Joint aspiration +/- U/S guidance :**
 - **Diagnostic:**
 - Confirm the diagnosis.
 - Culture & sensitivity.
 - **Therapeutic.**
- Radiology
 - **X-ray:**
 - Early: soft tissue shadow.
 - Later: decreased joint space then complete obliteration bony ankylosis.
 - **U/S:** accurate for detection of effusion.

b- Treatment:

- General
 - Bed rest + immobilization.
 - **Antibiotics.**
 - **Analgesics + fluids.**
 - **Antipyretics.**
- Specific **It is a surgical emergency**
 - Washout of the infected joint:
 - In knee, ankle and shoulder joints → arthroscopic washout or open arthrotomy + washout
 - In hip joint sepsis → only open arthrotomy.
 - If eroded cartilage → arthrotomy then traction for weeks.
 - If completely separated cartilage → arthrodesis.

➤ **Once diagnosed:-**

- Arthroscopic washout
- Open arthrotomy

Self-assessment

Volume II

22. A 33-year-old man presents with diarrhea (5 loose motion daily) for 4 months. By history: the stool contains mucous in some occasions, but he did not notice any per rectal bleeding. He had intermittent abdominal colicky pain relieved by defecation. On examination: tender right iliac fossa without palpable masses. Rigid sigmoidoscopy up to 15 cm from anus showed normal mucosa. Colonoscopy showed terminal ileal and caecal erythematous lesions. On biopsy: there were non-caseating granulomas with transmural affection.

Questions

- 1- What is the diagnosis?
- 2- What other manifestations should be looked for in this patient?
- 3- Describe main lines of treatment?

Self-assessment

Volume II

Answers

1- This is a case of croh's disease:

- Chronic diarrhea, abdominal pain
- Tender rigid iliac fossa
- Rectum, is not affected (making UC unlikely)

2-

a- Effects of Crohn's on the patient general condition:
malnutrition, anemia and weight loss

b- Extra-intestinal manifeststaions or crohn's:

- Obstructive uropathy
- Gall stones
- Skin manifestations: erythema nodosum, pyoderma gangrenosa
- Autoimmune arthritis, neuritis and ueveitis

3- Main lines of treatment are:

Medical treatment:

- Low residue, high protein and caloric diet with supplementary vitamins and minerals.
- Antispasmodics for pain.
- Corticosteroids, sulfasalazine (Salazopyrines) and metronidazole (Flagyl®) are also given in acute cases.

Surgical Treatment:

▪ Indications:

- 1- Failure of medical treatment.
- 2- Presence of complications e.g. IO, chronic debilitation.

▪ The aim:

- Limited resection of the affected segment to avoid malabsorption syndrome as the patient may be subjected to further resection in the future.

Self-assessment

Volume II

23. Male patient 57 years old heavy smoker presented to ER by bleeding pre rectum for last 4 hours. By history: blood was bright red and there was large amount of blood (about 1 liter). No weight loss, no appetite change, no altered bowel habits. Patient is non-diabetic

By examination: patient looked pale, sweaty, cold extremities, hypotensive 85 / 50 mmHg, tachycardia 123 bpm, normal core temperature. No abdominal tenderness, no distension, DRE revealed blood mixed with stools with blood clots

Questions

- 1- What is your differential diagnosis?
- 2- What is the most possible diagnosis?
- 3- How can you manage this case?

KEY POINTS

- 57 yrs ♂
- Heavy smoker
- B/R for 4 ms
- Large amount mixed with stools
- Pallor, anemia, hypotension, tachycardia → shocked pt.
- Other history of & examination irrelevant

Hint:

- **Causes of massive lower GIT bleeding:**
9. Angiomatous malformations.
 10. Aortoduodenal fistula.

Self-assessment

Volume II

Answers

- 1- DD of fresh bleeding pre rectum:
 - Piles (not massive bleeding, blood on stool surface)
 - Fissures (not massive bleeding, blood on stool surface, severe pain)
 - Dysentery (abdominal pain, tenderness, tenesmus, mucous with blood)
 - Diverticular disease (long history of constipation)
 - Congenital (angiomatous malformation)
 - IScheamic colitis
 - IBD (long history of diuarrhea, abdominal pain)
 - Neoplasm (not massive bleeding, progressive constipation)
 - Meckles' diverticulum
 - Radiation colitis (no past history of irradiation)
- 2- Most possible diagnosis is congenital angiomatous malformation (massive bleeding, no abdominal pain, tenderness, no altered bowel habits, no recent weight loss)
- 3- Management of this case?
 - a- Resuscitation and monitoring:
(Ryle, line, catheter, fluid) of (blood pressure,, pulse, temperature, urine output)
 - b- Urgent investigations to assess patient condition
CBC (in acute hemorrhage anemia may not be present for 8-10 hours)
ABG
Random blood sugar
 - c- Upper and lower GIT endoscopy searching for source of bleeding
 - d- Dramatic bleeding gives chance to mesenteric angiography to be benefit (only if blood is more than 1 ml/ minute)
 - e- If the source of bleeding is determined and bleed did not stop with conservative treatment urgent resection should be done
 - f- If all that measures failed to determine bleeder total colectomy and ilorectal anstomosis is the last choice

Self-assessment

Volume II

24. In patient 68 year-old, 5 days post-operative of anterior resection of rectal cancer is complaining of pain and swelling of left leg with no history of trauma. On examination: her vital signs are normal. Her left lower limb is swollen to mid thigh, with erythema of skin. The calf feels warm and tender even to touch, all pulses could be felt

Questions

- 1- What is the most likely diagnosis? What is your DD?
- 2- What are the complications of this disease?
- 3- How to manage this patient?

KEY POINTS

- 68 yrs ♂
- 5 days post-operative
- Painful swollen Lt. leg
- -ve history of trauma
- Erythematous, warm & tender Lt. leg
- Pulses all felt

Self-assessment

Volume II

Answers

1- This lady most likely has a thrombosed left popliteal vein (had DVT of left lower limb affecting popliteal vein)

- DVT:
 - Old age
 - Recumbant
 - Pain, tenderness, erythema, warmth and edema
 - All pulses are felt with no history of trauma
- Popliteal vein:
 - Edema to mid thigh

DD:

"Causes of Lower limb Edema"

A- Unilateral:

i- Acute:

- DVT
- Cellulitis
- Acute filaria.

ii- Chronic:

- Varicose veins.
- Chronic filaria

B- Bilateral:

i- Cardiac.

ii- Renal.

iii- Nutritional

iv- Angioneurotic.

2- Complications of DVT:

- General → pulmonary embolism.
- Local

a) Early:

1. **Phlegmasia alba dolens:** massive iliofemoral DVT may be associated with severe arterial spasm and lymphangitis, so the limb becomes pale, white and massively swollen with absent peripheral pulsation.
2. **Phlegmasia cerulae dolens:** massive iliofemoral DVT may be associated with severe congestion and cyanosis and the whole lower limb looks massively swollen and blue and if not probably treated, it may lead to venous gangrene.

b) Late:

1. **Post phlebitic limb** (secondary V.V due to destroyed valves 2ry to recanalization)
2. **Venous gangrene** (phlegmasia alba & cerulae dolens).

Self-assessment

Volume II

3- Management:-

A) Investigations:

1. Doppler & duplex:
 - Dead silence in complete DVT.
 - Loss of augmentation during inspiration in partial DVT.
2. Recently:
 - Radioactive fibrinogen → detect active uptake by thrombus
3. Spiral CT (most recent).

B) Treatment:

- General
 1. Absolute bed rest for 7 – 10 days
 2. Elevation of the limb to ↓ pain & edema
- Drugs
 1. Heparin: given 1st 7 – 10 days
 2. Oral anticoagulant → given together with heparin for 2 days then stop heparin

Self-assessment

Volume II

25. A 70 year old man presents to ER with severe dull pain in the dorsum of right foot, pain is worse at night, for the last week he slept in a chair to reduce pain, he is hypertensive with a past history of coronary bypass. On examination: the right foot was not tender but was pale and cold while the little toe was dusky red. Below femoral pulse, were absent on right side

Questions

- 1- What is the diagnosis?**
- 2- How can you manage?**

Self-assessment

Volume II

Answers

1- This is a case of severe chronic ischemia of right lower limb with rest pain complicated by impending gangrene of little toe

- Chronic ischemia:
 - Old age, hypertensive (atherosclerosis)
 - Pale and cold leg
 - Rest pain
 - Color changes in little toe
 - Coronary bypass (association)
- Rest pain: severe pain in dorsum of foot occurring at night relieved by uncovering and hanging of legs (sleeping in chair)
- Severe ischemia: rest pain, color changes

2- Management:

- Confirm the grade of ischemia:

I. • Doppler → ankle brachial index:

- < 30 → critical limb ischemia.
- Biphasic wave.

- Duplex → flow, anatomy & cross section

II. Angiography → site & extent of stenosis, state of collaterals run in & run off (given that the pt. kidney functions are optimun)

III. Other systems evaluation:

- 1- CBC → anemia
- 2- LFTs
- 3- KFTs
- 4- ECG

IV. Surgical management is the line (critical limb with impending gangrene)

- Distal run off (mostly femoropopliteal segment stenosis).
 - 1- Short segment (percutaneous transluminal angioplasty with stent).
 - 2- Bypass grafting:
 - Anatomical graft → femoro-popliteal
 - Extra-anatomical bypass

Self-assessment

Volume II

26. A 50-year-old woman presents with an ulcer resistant to healing in the lower part of medial aspect of left leg, the ulcer was caused by a minor trauma then enlarged. She had a history of left leg swelling and hospital admission in postoperative period of a caesarian section. On examination: there is an ulcer with slough and exudates at its floor. There is surrounding dark pigmentation, all pulses are felt in both LL, no pallor, coldness, sensory deficit, motor deficit, in left lower limb

Questions

- 1- What is the diagnosis?
- 2- How can you manage?

KEY POINTS

- 50 yrs ♂
- Ulcer resistant for healing on gaiter area
- History of DVT
- Surrounded by dark pigmentations
- All pulses are felt
- Intact arterial & neurological functions

➤ **Causes of leg ulceration**

1. Venous ulcers
2. Ischemic ulcers
3. Inflammatory ulcers
4. Chronic traumatic ulcers
5. Neoplastic ulcers
6. Neurotrophic ulcers
7. Blood diseases (sickle cell anemia)
8. Rheumatoid arthritis

Self-assessment

Volume II

Answers

- 1- This patient has an infected venous ulcer affecting left leg as a complication of chronic venous insufficiency most probably resulting from a previous attack of DVT
 - Venous ulcer:
 - In gaiter area
 - History suggestive of previous attack of DVT
 - Surrounding dark pigmentation
 - No manifestation of chronic ischemia or neuropathy
 - 2- treatment of ulcer
 - i- **Conservative treatment for early ulcer (main line of treatment):**
 - Rest.
 - Elevation of the limb.
 - Elastic stocking → below knee, exerts 40 mmHg pressure.
 - Dressing with saline & not antiseptics because of eczema.Most ulcers heal in 3-4 weeks.
 - ii- **Surgical For resistant recurrent ulcer:**
 1. **Cockett & Dodd operation:** Ligation of ankle perforator in the subfascial plane to avoid the infected ulcer (it can be performed by endoscopy).
 2. **If failed** → Excise the ulcer & cover it by Cross leg skin flap.
- b- After ulcer healing: Treatment of chronic venous insufficiency:
- 1- Conservative (mainly)
 - Avoid prolonged standing
 - Frequent leg elevation
 - Elastic stockings
 - 2- Surgical treatment (rarely)
 - Bypass surgery
 - Valve repair

Self-assessment

Volume II

27. A 70 year old man present to vascular clinic with cramping pain in right calf on walking relived by rest, the pain is worse in ascending stairs, No swelling, no previous surgery, no chest pain, and no history of trauma. On examination: Blood pressure 160/100 mmHg. No skin changes, femoral pulse is felt on both sides, but popliteal and dorsalis pedis arteries are not felt on right side. A bruit is heard over the right adductor canal
Rest of examination is unremarkable

Questions

- 1- What is the most likely diagnosis?
- 2- What is the DD of this condition?
- 3- What is the significance of the heard bruit?
- 4- What are the main lines of treatment?

KEY POINTS

- 70 yrs ♀
- Cramps in Rt. calf
- ↑ by walking, ↓ by rest
- Hypertensive
- Femoral pulses are felt
- Popliteal & dorsalis pedis pulses are lost on Rt. side
- Bruit heard on Rt. Adductor canal
→ femoral artery stenosis

Self-assessment

Volume II

Answers

- 1- This is a case of chronic ischemia of right femoral artery (or femoropopliteal junction)
 - Chronic ischemia:
 - Old age, hypertensive (athrerosclerosis)
 - Absent distal pulsation
 - Bruit over adductor canal
 - Femoral artery:
 - Claudications affecting calf muscles
 - Bruit over adductor canal
- 2- DD of claudications:
"Causes of acute limb pain"
 1. **Trauma:**
 - Fracture.
 - Dislocation.
 - Crush injury.
 2. **Inflammation:**
 - Rheumatoid arthritis.
 - Ankylosing spondylitis.
 3. **Infective:**
 - Cellulitis.
 - Myositis.
 - Osteomyelitis.
 - Septic arthritis.
 4. **Degenerative:**
 - Osteoarthritis.
 - Backer's cyst.
 5. **Vascular:**
 - Deep venous thrombosis.
 - Acute arterial occlusion.
 - Intermittent claudication.
 6. **Neurological:**
 - Sciatica.
 - Peripheral neuropathy.
 7. **Metabolic:** Gout.
 8. **Others:** cramp.
- 3- The bruit localizes sites of stenosis of artery but not always present
- 4- Main lines of treatment:
 - a- Conservative treatment (Best medical ttt):
 - Care of the patient: stop smoking, control of HTN, diet modification & antioxidants
 - Care of the foot: nails, hygiene & dryness
 - Drugs:
 - Alpha Blocker • Trental
 - Baby aspirin
 - Calcium channel blocker
 - b- Endovascular surgery: in short segment occlusion of big vessel with failure of medical treatment
 - c- Surgical treatment:
 - Indications: TTT of chronic ischemia → surgical TTT
 - Techniques
 - Run in and run off → direct arterial surgery
 - No run off → sympathectomy or intra-arterial PG
 - d- Amputation:
 - Is the last step of severely painful useless limb with failure of all above measures.

Self-assessment

Volume II

28. A 40 year old woman presents to vascular clinic with 10 year old history of pain and parathesia in left hand, this morning she notices blackening of thumb and index finger tips
She is a heavy smoker. On examination: no signs of acute ischemia are present in left hand but tips of thumb and index were gangrenous and no neurological deficit. Neck examination revealed a hard swelling in supra-clavicular fossa, non-pulsatile and immobile

Questions

- 1- What is the diagnosis?
- 2- What are the possible causes of that gangrene?
- 3- What investigations you request?
- 4- What are the treatment options for this case?

KEY POINTS

- 40 yrs ♀
- Pain & parathesia of Lt. hand
- 10 yrs duration
- Sudden blackening of thumb & index
- Heavy smoker
- Hard swelling is supraclavicular fossa

Self-assessment

Volume II

Answers

- 1- This is a case of left sided cervical rib complicated by neuropathy and gangrene of thumb and index fingers
 - Cervical rib: hard, non-pulsatile immobile swelling in supra-clavicular fossa with neurovascular manifestations
- 2- Possible cause of gangrene are:
 - a- Subclavian aneurysm developing at site of compression, thrombi forming in this aneurysm can detach and embolize in digital arteries causing gangrene of finger tips
 - b- Secondary Raynaud's that may occur with cervical rib
But there is no manifestation of chronic ischemia making the embolic cause more likely
- 3- Investigations required
 1. **Plain x-ray** → cervical rib.
 2. **Arteriography** → show post - stenotic dilatation.
 3. **Nerve conduction studies** →
Reveal prolonged nerve conduction time.
→ **Very useful to differentiate carpal tunnel syndrome from thoracic outlet syndrome.**
 4. ECG / ECHO: to detect cardiac arrhythmias as a possible cause of distal embolization
- 4- Treatment should include:
 - A- Care of gangrenous fingers: debridement and repair with possible plastic reconstructions
 - B- Care of cervical rib: surgical excision is the treatment of choice
 - C- Care of subclavian aneurysm is present:
 - Excision graft
 - Exclusion graft
 - Intraluminal self-inflatable graft

Self-assessment

Volume II

29. A 65 year old woman presents to ER with sudden onset left arm pain, 2 hours duration, progressive, she vomited once. She had denied any history of trauma, hypertension or cardiac problems. On examination: the left hand and forearm was cold, pale, radial and ulnar pulses could not be felt, active movement is intact and no sensory loss is present

Questions

- 1- What is your diagnosis?
- 2- What is the commonest etiology for that condition?
- 3- What other etiologies do you know for that condition?
- 4- What investigations would you request?
- 5- Describe main lines of treatment?

KEY POINTS

- 65 yrs ♀
- Lt. arm pain
- Sudden onset
- Short duration
- Vomited once → severe pain
- Cold Lt. hand
- Lost radial & ulnar pulses
- Intact motor & sensory functions (good sign)

➤ **Symptoms & Signs of acute ischemia**

- Pain
- Pulses
- Pallor
- Parathesia
- Progressive coldness
- Paralysis

Self-assessment

Volume II

Answers

- 1- The patient has acute ischemia of left upper limb affecting left axillary or proximal brachial artery
 - Acute ischemia:
 - sudden onset of pain
 - Cold pale pulseless limb
 - Axillary or proximal part of brachial:
 - Manifestations are present in both arm and forearm
- 2- The commonest etiology of this condition is arterial embolism
- 3- Other etiologies:
 - a. Cardiac arrhythmias: commonly AF
 - b. Aneurysmal disease
 - c. Atrial myxomas
 - d. Thrombophilias
- 4- The required investigation for this case are:
 - **Site of impaction:**
 - Doppler, Duplex.
 - Arteriography (mainly preoperative, as it may cause delay for 2 - 3 hours therefore, it is not done in a threatened limb).
 - **For the cause e.g.:**
 - Echo, ECG → to detect AF.
 - X-ray → injuries for fracture.
 - **For Complications:**
 - ↑TLC, ↑CPK & acidosis if muscle necrosis.

↑ HB, creatinine, BUN indicates hypovolemia due to fluid sequestration in the limb.
- 5- Main lines of treatment
 1. **Pre-operative preparation:**
 - Hospitalization
 - Heparin (to prevent propagation)
 - Antibiotics
 - Analgesics up to morphia
 1. **Operative:**
 - a. Embolism.
 - b. Thrombosis.
 - c. Injury.
 2. **Post-operative:**
 - a. Cause.
 - b. Complications.

Self-assessment

Volume II

30. A 75 year old man is brought to ER with 1 hour duration of sudden severe chest pain radiating to the back, which occurred at rest. He has a history of rheumatoid arthritis, severe asthma and hypertension. On examination: pulse 105 bpm, Blood pressure 170/100 mmHg. CXR shows widened mediastium

Questions

- 1- What is the most likely diagnosis?
- 2- How can you manage this case?

Self-assessment

Volume II

Answers

- 1- This patient is having a dissecting aortic aneurysm:
 - Old man
 - Severe chest pain, radiating to back at rest
 - Hypertensive
 - Widened mediastium on CXR
- 2- With the data diagnosis is established with no need for further investigations, so emergency treatment should be conducted at once
 - a- Resuscitation and monitoring (mention)
 - b- Control of hypertension: is life-saving in this patient, it is usually done by IV beta blocker drip but in this case, the patient has severe asthma, so other measures (IV nitrate drip, Na nitrate prusside drip) should be conducted
 - c- Cardiothoracic surgeon should then request aortography and decide further management of the patient

Self-assessment

Volume II

31. During a routine physical examination, a family physician identifies an asymptomatic pulsatile abdominal mass in a 62 years old man. His past history is significant for hypertension and stable angina. He has a history of smoking 40 packs of cigarettes/day. His current medications include aspirin, a β -blocker, and nitrates. The patient describes himself as an active man who is retired and plays 18 holes of golf twice a week. On examination, the carotid pulses and upper extremity pulses are found to be normal. The abdomen is not tender with a prominent aortic pulsation. Pulses in the femoral and popliteal regions are easily palpated and appear more prominent than usual.

Questions:

- 1- What is the most probable diagnosis?
- 2- What are the investigations to be done?
- 3- What is the best line of treatment for this patient?

KEY POINTS

- 62 yrs ♂
- HTN & angina pectoris (Suggestive of atherosclerosis).
- Smoker.
- Pulsatile abdominal mass.
- Prominent abdominal aortic pulsations.

Self-assessment

Volume II

Answers

1- The most probable diagnosis is abdominal aortic aneurysm as:

- The patient is old, hypertensive & atherosclerotic.
- Heavy smoker.
- Pulsatile abdominal mass.
- Prominent abdominal pulsations.

2- Investigations:

- a- Plain X-ray: discovered calcifications in the wall of aorta.
- b- U/S: best as it is non-invasive, cheap & can determine the diameter & extension of the aneurysm.
- c- CT scan: the most accurate investigation:
 - To determine the diameter of the aneurysm.
 - To determine if the upper limit of the aneurysm is below, at or above the renal arteries.

3- Treatment:

- According to the diameter of the aneurysm:
 - If < 5.5 cm → follow up every 6 months by U/S.
 - If > 5.5 cm → Exclusion graft
Or Excesional graft
Or endoluminal self inflatable graft.

Self-assessment

Volume II

32. A 55 year old man with a post-prandial epigastric pain occurring immediately after eating for 3 months
He was diagnosed as having a peptic ulcer and is on treatment with proton pump inhibitors for 2 months with little improvement

Questions

- 4- What are causes of little or no improvement of peptic ulcer with PPI?
- 5- How can you manage this case?

KEY POINTS

- 55 yrs ♂
- Epigastric pain
- Postprandial
- 3 ms. duration
- Peptic ulcer resistant for healing

➤ HINT

Cause of resistance	Method of detection	Treatment
H pylori infection	Biopsy-serology-urease test	Triple therapy
Zollinger Ellison syndrome	Gastrin assay –octreotide CT Scan	Detectable-resection Undetectable → gastrectomy
Hyperparathyroidism	Serum calcium-phosphorus-CT- MRI- subtraction scan	Secondary → remove cause Others → resection with preimplantation of part of forearm
Malignancy	Endoscopy-biopsy	Operable Non-operable

Self-assessment

Volume II

Answers

- 4- Cause of resistance peptic ulcer
- a- H. pylori infection
 - b- Zollinger Ellison syndrome
 - c- Hyperparathyroidism
 - d- Malignancy
- 5- 4-steps of management should be conducted in order:
- I- Upper GI endoscopy with 4 punch biopsy and brush cytology especially if gastric ulcer, if proved malignant stage as operable or non-operable then manage (see cancer stomach)
 - II- If not malignant search for other above causes of resistance and treat any if present:
 - a- H-pylori → triple therapy
 - b- Zollinger Ellison syndrome
 - If detectable tumor → resection
 - If undetectable → total gastrectomy
 - III- Hyperparathyroidism → treatment of the cause in secondary cases
- Other causes: excision of the 4 glands and re-implantation of part equivalent to normal in forearm
- 6- If no causes of resistance could be detected: another course of 8 weeks of PPI should repeated with follow up by endoscopy especially in gastric ulcers
- 7- If no improvement occurs, this is considered as failure of medical treatment and surgical treatment should be considered
- Gastric ulcer → partial gastrectomy and anastomosis
 - Duodenal ulcer → vagotomy and drainage procedure

Self-assessment

Volume II

33. A 56-year old man presented to his GP by dyspepsia in the form of epigastric discomfort and nausea immediately after meal for weeks. Treated by proton pump inhibitors for 10 days with no improvement. No history suggestive of GERD or biliary disease. He is a smoker of 30 cigarettes daily for 35 years. Examination revealed nothing abnormal, other than palpable left supra-cervical LN. CBC was done, Hb was 9 gm %

Questions

- 1- What is the most likely diagnosis?
- 2- What investigations would you request?
- 3- Is this case operable?

KEY POINTS

- 56 yrs ♂
- Dyspepsia → weeks duration
- PPIs for 10 days
- Resistance for TTT
- Smoker for 35 yrs
- Virchow's L.N.
- Hb % = 9 gm%

Self-assessment

Volume II

Answers

- 1- This is most likely a case of cancer stomach:
 - Old man
 - Heavy smoker
 - Dyspepsia for 3 weeks not responding to treatment
 - Enlarged left supracavicular LNs
 - Anemia

- 2- Investigations required are:
 - A- For diagnosis**
 1. Upper GI endoscopy
 2. Punch biopsy from the lesion
 3. Barium meal
 - Cauliflower mass → irregular filling defect
 - Malignant ulcer → ulcer nitch > 2cm outside ulcer bearing area
 - Carmen meniscus sign
 - Linitis plastica
 - B- For staging**
 1. Abdominal U/S
 2. CT scan
 - C- For follow up**
 1. CEA ↑ (although non specific)
 2. CA 19-9
 3. CA 72-4
 - D- Preoperative preparation**
 1. CBC
 2. KFTs, LFTs & serum electrolytes

- 3- First of all elevation of general condition and treatment of anemia
 - The case is inoperable due to wide lymphatic spread (supra-clavicular LNs).

Self-assessment

Volume II

34. Male patient 55 years old diabetic known to have cancer esophagus developed fever, disorientation and productive cough. X-ray revealed circumscribed opaque area in right lower lung field, patient then passed into ketoacidotic coma and admitted to ICU but the lung condition was omitted. Two weeks after discharge, patient began to complain of paroxysmal attacks of cough with expectoration of large amount of foetid sputum, X-ray revealed cavitary lesion in the right lower lung field with hilar and mediastinal shadows

Questions

- 1- What is your most possible diagnosis of both stages?
- 2- What investigations would you prescribe to this patient?
- 3- Describe the main lines of treatment of that patient?

KEY POINTS

- 55 yrs ♂
- Diabetic
- With cancer esophagus
- Fever & productive cough
- Circumscribed opaque area in Rt. lower lung field
- Cough & expectoration
- Large amount of foetid sputum 2 wks later

➤ **Risk factors for cancer esophagus**

⇒ **Chronic irritation:**

- Spicy food
- Smoking
- Barret's esophagus
- Achalasia of esophagus
- Postcorrosive esophagitis
- Tylosis A.

⇒ **Benign tumors:**

- Papilloma or adenoma

Self-assessment

Volume II

Answers

- 1- This case is known to have cancer esophagus
 - Development of coin lesion in cancer esophagus can be metastasis or lung infection (due to depressed immunity) (also the patient is diabetic) and aspiration
 - Fever, disorientation and ketoacidosis go with the diagnosis of lung infection (acute lung abscess) (also the later development of suppurative syndrome and cavitary lesion)
 - The second stage resulted from neglect of lung infection is the development of chronic lung abscess
- 2- This patient has infection and tumor
 - To assess the patient:
 - CBC, fasting and post-prandial blood sugar, BMI measurement, LFTs, KFTs
 - To assess the infection:
 - CXR, CT scan, sputum culture and sensitivity
 - To assess the tumor:
 - Confirm the diagnosis: endoscopy, barium swallow
 - Extent and operability: CT scan, endoluminal US
- 3- main lines of treatment:
 - 1st elevate the general condition
 - a- Good nutrition: (parenteral or by gastrostomy)
 - b- Treat infection: prolonged course of double antibiotics according to C & S (aspiration and antibiotic injection may be tried)
 - c- Strict control of DM (better by insulin)
 - 2nd treat the tumor:
 - a- inoperable → (hilar and mediastinal shadows:) photocoagulation, bypass, intubation, radiation)

Self-assessment

Volume II

35. A 70 year-old man complains of deepening yellow discoloration of skin of 3 months duration

By history: there is no abdominal pain, but there is reduced appetite, weight loss and dark urine with pale greasy stools, he is heavy smoker. On examination: there is smooth mass in the right upper abdominal quadrant

Questions

- 1- What is most likely the diagnosis?
- 2- What is the value of this abdominal mass?
- 3- What investigations would you request?

KEY POINTS

- 70 yrs ♂
- Jaundice for 3 ms
- ↓ appetite & wt. loss
- Dark urine & steatorrhea
- Smooth mass in Rt. upper abdominal quadrant

Hint:

➤ **Courvoisier's law:**

In case of obstructive jaundice if GB is palpable, it is most probably non – calcular (malignant)

Self-assessment

Volume II

Answers

- 1- This is a case of obstructive jaundice, most probably due to biliary stricture (malignant)
 - obstructive jaundice:
 - Yellowish discoloration of skin
 - Dark urine with pale greasy stools
 - malignant biliary obstruction
 - old man
 - Reduced appetite and weight loss
 - Palpable gall bladder
- 2- This mass indicates that the gall bladder is healthy making diagnosis of chronic calculous cholecystitis unlikely and biliary stricture more likely (Courvoisier's law)
- 3- Required investigations are:
 1. For diagnosis:
 1. LFTs:
 - a-bilirubin: ↑serum bilirubin mainly direct fraction
 - b-SGOT&SGPT: no rise unless cholangiohepatitis occurs
 - c-PT: prolonged due to defect in vitamin K, improved by I.V vitamin K
 2. Stool: Clay colored, bulky, offensive & No stercobilinogen
 3. urine: dark colored, frothy, no urobilinogen & ↑direct bilirubin
 4. ERCP
 5. PTC
 6. Barium meal (obsolete): widening of the C-curve of the duodenum
 7. Tumor Markers:
 - Carcinoembryonic antigen (CEA).
 - Pancreatic oncofetal antigen (POFA).
 - Pancreatic cancer associated antigen (PCAA).
 2. For staging:
 - U/S, CT scan.
 3. For preoperative preparation
 - CBC, CXR, KFTS

Self-assessment

Volume II

36. A 50 year old man presents with epigastric pain for 6 months. By history: he had weight loss, and more frequent bulky malodorous stool. The pain is constant throughout the day and not relived by food. On examination: there is no jaundice, no abdominal masses and no lymphadenopathy, he is a heavy alcohol consumption. Random blood sugar measurement is 220 mg/dl

Questions

- 1- What is the most likely diagnosis?
- 2- What investigations would you request?
- 3- How to manage this patient?

KEY POINTS

- 50 yrs ♂
- Epigastric pain
- 6 ms duration
- Constant not ↓ by food
- Bulky offnsive stools
- Alcoholic (heavy)
- RBCs = 220 mg/dl (hyperglycemic)

Self-assessment

Volume II

Answers

1- Most likely diagnosis is chronic pancreatitis

- Old high alcoholic consumer
- Epigastric pain not related by food
- Steatorrhea (exocrine malfunction)
- DM (Endocrine malfunction)

2- Investigations required

1. Radiological:

1. Plain X-Ray of the abdomen:

- Shows **calcification** of the pancreas or stones.

2. U/S and CT scan:

- Atrophy and calcification.

3. ERCP:

- Alternating stricture and dilatation of pancreatic duct (**chain of lakes**)
- Cytology of pancreatic juice to exclude malignancy.

2. Laboratory:

1. Lundh test (Secretin / CCK stimulation test):

- To confirm pancreatic insufficiency.

2. Glucose tolerance test (GTT):

- To demonstrate diabetes mellitus.

3. 5-day stool collection for fat excretion:

- To demonstrate steatorrhea (the patient takes 100 gm/day, normally fat excretion < 5 gm/day).

4. LFTs.

3- Treatment:

CONSERVATIVE:

1. Correction of malabsorption
 - Pancreatic extract
 - H₂ receptor antagonists
2. Fat restriction up to 25%
3. Fat soluble vitamins
4. Management of DM
5. Pain:
 - Abstinence from alcohol
 - Analgesics
 - PC coeliac plexus block

Self-assessment

Volume II

37. 45 year old female came to ER by right upper abdominal pain of 3 days duration, constant, of sudden onset, precipitating by heavy meal. By history, there was fever, several attacks of vomiting. No constipation, no frequency or dysuria, she is diabetic on oral hypoglycemics. On examination: temp 39 C, pulse 115 bpm, no jaundice. Abdominal examination: Rt. hypochondrial mass, difficult to feel due to tenderness and rigidity, DRE done and NAD. She has long history of fat dyspepsia

Questions

- 1- What is your diagnosis?
- 2- What special signs would you elicit on this patient?
- 3- Random blood sugar done to this patient was 543 mg/dl, how would you manage?
- 4- Describe main lines of treatment?

KEY POINTS

- 45 yrs ♀
- Biliary colic
- Fever 39°C
- Nausea & vomiting
- Diabetic on OHG
- No jaundice
- History of fat dyspepsia

➤ DD of acute cholecystitis

1. Acute pancreatitis
2. Acutely perforated DU
3. Acute appendicitis (subhepatic appendix)
4. Amoebic hepatitis
5. Right pyelonephritis

Self-assessment

Volume II

Answers

- 1- This lady has an acute exacerbation of chronic calcular cholecystitis
 - Acute cholecystitis:
 - Acute right upper abdominal pain precipitated by heavy meals
 - Fever, tachycardia
 - Tenderness and rigidity in right upper abdomen
 - Chronic cholecystitis:
 - 45 year old female
 - Long history of dyspepsia
- 2- Special signs that can be elicited in this patient:
 - **Boas' sign**: An area of hyperesthesia between Rt. 9th & 11th ribs posteriorly.
 - **Leak's sign**: (edema over right costal margin esp. in pyoceles).
 - **GB mass**: difficult to palpate due to overlying tenderness and rigidity.
- 3- this patient should be tested for ketoacidosis by dip sticks in urine sample and ABG
 - If she has ketoacidosis by control of infection, rehydration, IV regular insulin and treatment of hyperkalemia if present
 - If there is no ketoacidosis, she should be given 30 units of regular insulin IV, then her blood sugar should be controlled with insulin with stoppage of oral hypoglycemics till infection subsides
- 4- This patient should be managed medically by conservation
 - If manifestations improve → later elective cholecystectomy
 - If manifestations worsen → cholecystectomy (should be considered early in this patient as she is diabetic with high possibility of gangrene and perforation → generalized peritonitis)

Self-assessment

Volume II

38. The GP referred to you (in surgery outpatient) a female 50 year old presented with attacks of abdominal pain, nausea and sometimes vomiting for 6 months remaining for 2-4 hours every time, she noticed that fried food precipitate the attacks
On examination: vital signs within normal, mild tenderness in right upper quadrant, no jaundice, no lymphadenopathy, no loin pain

Questions

- 1- What is the diagnosis>
- 2- How can you confirm/.
- 3- What treatment options do you have?

KEY POINTS

- 50 yrs ♀
- Fat dyspepsia
- 6 ms duration
- Mild tenderness in Rt. upper quadrant
- No jaundice

➤ **Causes of dyspepsia**

- **Esophageal causes**
 - GERD
- **Gastric causes**
 - Chronic gastric ulcer
 - Chronic gastritis
 - Gastric carcinoma
- **Duodenal causes**
 - Chronic duodenal ulcer
 - Duodenitis
- **Biliary causes**
 - GB stones
 - Chronic cholecystitis
 - GB carcinoma
- **Pancreatic causes**
 - Chronic pancreatitis
 - Pancreatic carcinoma

Self-assessment

Volume II

Answers

- 1- Most likely this is a case of chronic cholecystitis with attacks of biliary colic
 - Chronic calculous cholecystitis
 - 50 year old female
 - History suggestive of biliary colic
 - Tenderness in right upper quadrant
 - biliary colic:
 - abdominal pain, nausea and vomiting precipitated by fried food (fatty meal)
- 2- The case is clinically diagnosed but can be confirmed by investigations
 - a. For diagnosis:
 - Abdominal U/S:
 - GB is shrunken & fibrotic + presence of stones
 - Stone in CBD or dilated CBD
 - Dynamic U/S:
 - To detect the function.
 - Oral Cholecystography: not done now.
 - Plain X-Ray
 - Only 10-15% of stones are radiopaque.
 - b. For complications:
 - LFTs:
 - (If high direct bilirubin & ALP → Stone in CBD → ERCP is needed)
 - ERCP:
 - If patient is jaundiced or there is history of jaundice
 - c. To exclude wilkies or saint`s triad:
 - Endoscopy
 - Barium meal
- 3- this patient should be treated by cholecystectomy (better laparoscopic)

➤ **NB**

- Dissolution therapy is an option of treatment but not usually conducted because of
 - Long duration of treatment (18 months)
 - Complications of drugs used
 - High failure rate
 - High recurrence rate
 - Only possible in small pure cholesterol stones

Self-assessment

Volume II

39. A 64 year old woman presents with upper abdominal pain and itching of 1 week duration and progressive course. By history: there is yellowish discoloration of skin, pale stools and dark urine. There is a long history of fat dyspepsia but no alcohol consumption and no smoking. On examination: she was clinically jaundiced with tender right upper quadrant

Questions

- 1- What is the most likely diagnosis?
- 2- How can you manage this case?

KEY POINTS

- 64yrs ♀
- Upper abdominal pain
- Jaundice
- Dark urine
- Pale stools } OJ
- Itching
- 1 week duration
- Progressive course
- History of fat dyspepsia

Self-assessment

Volume II

Answers

1- This is case of obstructive jaundice most probably due to CBD stone (primary or secondary to gall stone)

- Obstructive jaundice:

- Itching
- Yellowish discoloration of skin
- Dark urine and pale stool

- CBD stone:

- Painful jaundice in a female with long history of fat dyspepsia

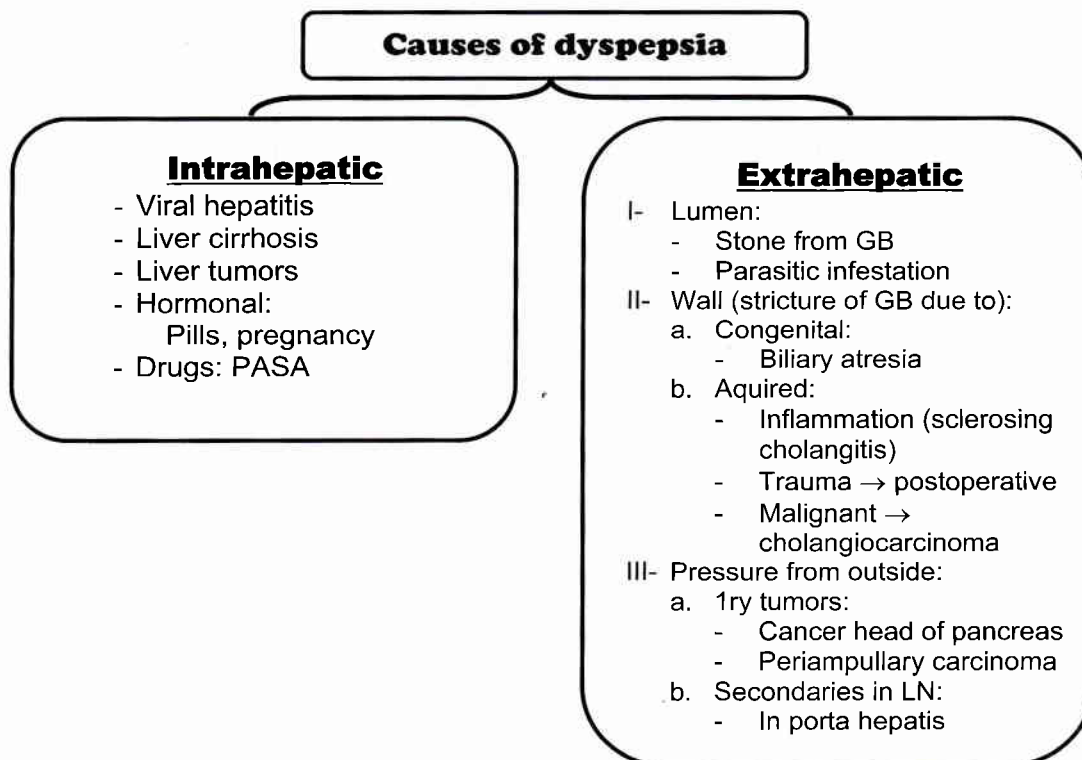
2- Management:

a- Investigations:

- Should be done for confirmation of diagnosis and assessment of patient condition

b- Treatment:

- Cholecystectomy (NB: Modified Fowler's position is preferred during cholecystectomy).
- Treatment of complications e.g. obstructive jaundice (see later).



Self-assessment

Volume II

40. 70 year old man presents to ER by colicky lower abdominal pain for 4 days, absolute constipation for 2 days and several bouts of vomiting last day. By history: he lost 10 kg of weight last 3 months, occasionally noticed per rectal bleeding of bright red blood mixed with stool, last 40 days he had progressive constipation with increased laxative dose required to keep his bowel habits

Questions

- 1- What is the most likely diagnosis?
- 2- What is your DD?

KEY POINTS

- 70 yrs ♂.
- Colicky lower abdominal pain.
- Absolute constipation.
- Vomiting.
- 2 days duration.
- 10 kg loss of wt / 3m.
- B/R (blood mixed with stools).
- Progressive constipation for 40 days.

- Any changes in bowel habits in any old male is considered colonic cancer till proved otherwise

Self-assessment

Volume II

Answers

- 1- This is a case of intestinal obstruction most likely due to cancer of left side of colon (descending – sigmoid)
- intestinal obstruction:
 - Colicky lower abdominal pain
 - Absolute constipation
 - Vomiting
 - Cancer left side of colon
 - Old male with acute on top of chronic intestinal obstruction
 - Constipation precedes vomiting by one day
 - Weight loss
 - Bright red → fresh blood
 - Mixed with stools → above rectum and anal canal
 - Progressive constipation

DD of this case:

- a- For intestinal obstruction in this age:
- 1- Sigmoid volvulus
 - 2- Strangulated hernia
 - 3- Impacted feces
- b- For bleeding per rectum”

	<u>Vascular</u>	<u>Inflammatory</u>	<u>Traumatic</u>	<u>Neoplastic</u>
Anorectal causes	Hemorrhoids.		Anal fissure	• Rectal carcinoma. • Anal carcinoma.
Intestinal causes	• Mesenteric infarction • Intussusception • Angiodysplasia	• Amebic dysentery. • Crohn's disease. • Ulcerative colitis. • Bilharzial colitis. • Diverticular disease. • Meckle's diverticulum.		• Colonic carcinoma. • Colonic & small intestinal polypi (e.g. FPC)
Esophageal & gastro-duodenal causes	Esophageal varices	PU		

Self-assessment

Volume II

41. A 12 year old boy complained of right inguinal pain & swelling. He had vomiting with abdominal colic, his temperature was 37.2°C. on examination the swelling was at the right inguinal region, tender on palpation and irreducible, the right scrotal compartment was empty.

Questions

- 1- Discuss the differential diagnosis of this case.
- 2- What are the investigations to be done?
- 3- Outline the lines of treatment of this patient.

KEY POINTS

- 12 yrs ♂.
- Rt. Inguinal pain & swelling.
- Nausea & vomiting, abdominal colic.
- Swelling is irreducible & tender.
- Empty Rt. Scrotal compartment.

Self-assessment

Volume II

Answers

1- Differential diagnosis of this case:

1) Complicated inguinal hernia mostly obstruction (as there is no fever or strangulation):

➤ Suggested by:

- Site (on anatomical site of hernia).
- Irreducible swelling suggest complication either obstruction or strangulation.
- Vomiting & abdominal colic → intestinal obstruction.
- Indirect inguinal hernia is present in about 75% of cases of undescended testis.

2) Torsion of an incompletely descended testis:

➤ Suggested by:

- Patient is young age (commonest pediatric urologic emergency).
- Empty Rt. scrotal compartment → torsion occurs mostly on imperfectly descended testis.
- Rt. inguinal swelling which is irreducible.
- Normal temperature (to differentiate from acute epididymo-orchitis).

3) Acute inguinal lymphadenitis:

➤ Suggested by:

- Painful tender inguinal swelling.
- Irreducible swelling.
- Search the catchment area for apparent source of infection.

4) Acute epididymo-orchitis.

2- Although that this is usually clinically diagnosed and it is advisable to proceed directly to surgical exploration to avoid testicular gangrene, but:

➤ Investigations (are of importance):

- a- U/S & C.T.: to locate the site of undescended testis.
- b- Laparoscopy (the best): to locate the site of undescended testis.
- c- Doppler & Duplex scan: to detect obstruction of blood flow in testicular vessels.
- d- Urine analysis.
- e- Preoperative investigations: Hb level, CBC, LFTs & CXR.

Self-assessment

Volume II

3- Lines of treatment of this patient:

A- Elevate the patient's general condition:

- IV cannula, Ryle.
- IV fluids.
- Urinary catheter to evaluate the urine output & hydration.
- Analgesics.

B- Surgical treatment:

➤ **According to the cause:**

1. Complicated inguinal hernia:

- Herniotomy.
- Herniorrhaphy is usually not indicated as the patient is young with strong abdominal musculature.
- Deal with the intestine according to viability:
 - If viable → reduced to the abdomen.
 - Doubtful → cover it by hot saline packs + pure O₂ inhalation for few minutes then decide whether viable or not.
 - Non-viable → resection anastomosis.

2. Testicular torsion:

- Untwist the cord.
- Orchiopexy to prevent recurrence.
- Eversion of the tunica to prevent hydrocele formation → if the testis is gangrenous → orcheictom.

Self-assessment

Volume II

42. A 65 years old male patient with a history of dyspepsia for the past 6 months and attacks of vomiting, abdominal pain with epigastric fullness, yellowish discoloration of the sclera associated with tea-coloured urine which appeared 2 wks ago. On examination the abdomen was found to be mildly distended, but lax. An intraabdominal mass was found at the epigastrium moving with respiration and the patient was jaundiced. Investigations revealed Hb 7.5 gm%.

Questions

- 1- Discuss the differential diagnosis of this case.**
- 2- What are the investigations to be done to reach a proper diagnosis?**

Self-assessment

Volume II

Answer

1- Differential diagnosis:

- 1) Carcinoma of the stomach with liver metastasis or with secondaries in L.N. in porta hepatis → obstructive jaundice.
 - Suggested by:
 - Old aged male.
 - 6 months history of dyspepsia.
 - Vomiting, epigastric pain and fullness.
 - Jaundice appeared only 2 wks ago.
 - Mass at epigastrium moving with respiration.
 - ↓ Hb% → anemia due to chronic blood loss or cancer cachexia.
- 2) Cancer head of pancreas → CBD obstruction
 - Suggested by:
 - Old aged male.
 - 6 months history of dyspepsia (due to malabsorption).
 - Epigastric mass could be a gall bladder mass as pancreatic mass doesn't move with respiration (Courvoisier's law).
 - Obstructive jaundice (yellowish discoloration of sclera, dark urine).
- 3) Calculus obstructive jaundice
 - But it is less likely because:
 - Patient's old age.
 - Short duration & progressive course of the symptoms.
 - Presence of epigastric mass (Courvoisier's law).
 - Although the dyspepsia could be fat dyspepsia but there is no history of symptoms of biliary colic.

2- Investigations:

I- To prove type of jaundice:

- a. LFTs:
 - Billirubin: ↑ mainly direct fraction.
 - Alkaline phosphatase: > 30 KA units.
 - SGOT & SGPT: usually not ↑↑ except if with liver secondaries or cholangiohepatitis.
 - γ glutamyl transferase and 5-nucleotidase.
 - PT: prolonged due to defect in Vit. K.
- b. Stools: Clay colored, No stercobilinogen.
- c. Urine: Dark colored, frothy (bile salts) & No urobilinogen

Self-assessment

Volume II

↑ direct fraction of bilirubin > 10 mg%.

II- To find the cause:

1. Abdominal U/S:
 - CBD stones are suggested by CBD diameter >8 mm on U/S.
 - A mass of head of pancreas may be detected.
2. CT scan:
 - Masses in pancreas.
 - Liver deposits.
 - Metastatic LNs.
3. ERCP:
 - Where both common bile duct & pancreatic duct will be visualized.
 - Detects any lesion of the ampulla of vater and biopsy may be taken.
4. Tumor markers:
 - CEA, POFA, PCAA.
 - They are all of prognostic value.
5. Upper gastrointestinal endoscopy → to visualize the macroscopic picture of any lesion and take a biopsy.
6. Barium meal:
 - Carcinoma of stomach:
 - Filling defect of cauliflower mass.
 - Carmen meniscus sign.
 - Linitis plastica → infiltrating type of carcinoma.
 - Cancer head of pancreas:
 - Widening of C-curve of the duodenum.
 - Periapillary carcinoma:
 - Inverted 3 shaped appearance.

III- For staging:

1. U/S: abdominal & pelviabdominal to detect secondaries.
2. CT scan: detects L.N. involvement.

Self-assessment

Volume II

43. During the routine physical examination of a 30 years old, fair complexioned white man, you discover a 1.5 cm pigmented skin lesion on the postreior aspect of his shoulder. This lesion is non-indurated, has ill-defined borders and is without surrounding erythema. Examination of the patient's left axilla & neck reveals no identifiable abnormalities. No other pigmented skin lesions are observed during your through physical examination. According to the patient's wife, this skin lesion has been present for the past several months, and she believes it has increased in size & become darker during this time. The patient is otherwise healthy.

Questions

1. What is your next step?
2. What is the most likely diagnosis?
3. What it the best treatment for this problem?

KEY POINTS

- 30 yrs ♂.
- Fair colred.
- 1.5 cm pigmented skin lesion on Lt. shoulder.
- Ill defined borders.
- Few months duration.
- Increasing in size.
- Deepens in color.
- Axillary L.N. -ve.
- No other similar swellings.

Self-assessment

Volume II

Answer

1- The next step would be excisional biopsy to exclude or confirm malignancy.

2- Most likely diagnosis is malignant melanoma

Because:

- Patient is an adult fair colored white man.
- Pigmented skin lesion.
- Short duration.
- Ill defined border.
- Darkening in color.

3- Best treatment for this problem:

A. For 1ry tumor:

- Surgical excision with adequate safety margin of skin and subcutaneous tissue but not including the deep fascia → plastic reconstruction.
 - If tumor thickness < 1mm → safety margin is 1 cm.
 - If tumor thickness 1 – 4 mm → safety margin is 2 cm.
 - If tumor thickness > 4 mm → safety margin is 3 cm.

B. For draining lymph nodes:

- As they are not clinically enlarged, so fine needle aspiration cytology is performed.
- If +ve → Radical dissection, but there's no prophylactic block dissection of LNs.

Hint:

➤ Staging of malignant melanoma:

I-Clarks classification:

- Level I → malignant cells are above the BM.
- Level II → superficial invasion of the dermis.
- Level III → invasion of the reticular skin layer.
- Level IV → invasion of the hypodermis.

II- Breslow's classification (better used):

1. Skin infiltration < 0.75 mm.
2. Skin infiltration 0.75 – 1.5 mm.
3. Skin infiltration 1.5 - 3 mm.
4. Skin infiltration > 3 mm.

Self-assessment

Volume II

44. A 25 year old manual worker presented with 36 hours duration anal and lower back pain that made him unable to work, or even sit down, the pain did not respond to analgesics

On examination: temp/ 38°C.

At the anal margin, there is 3 X 4 cm cystic fluctuant extremely tender swelling

Questions

1- What is the diagnosis?

2- How can you manage?

KEY POINTS

- 25 yrs ♂.
- Anal & lower back pain.
- Acute onset.
- 36 hrs duration.
- Impairs working & sitting down.
- Feverish 38°C.
- Cystic fluctuant tender swelling on anal margin.

Self-assessment

Volume II

Answers

- 1- This is a case of perianal abscess
- Acute onset of anal pain with no response to analgesics
 - Fever
 - Cystic fluctuant tender mass at anal margin

2- Management:

a- Investigations:

- 1- ↑ TLC.
- 2- U/S (if pelvi-rectal abscess)
- 3- Fistulo-gram (if fistula developed)(has little or no value)
- 4- Culture of abscess material

b- Treatment:

Treatment of the abscess

- Urgent surgery (incision and drainage under general anesthesia).
 1. General anesthesia
 2. Examination under anesthesia and sigmoidoscopy / colonoscopy for detection of internal fistulous opening.
 3. If perianal or ischiorectal → drainage under general anesthesia by Cruciate incision with excision of skin edges.
 4. If submucous → drainage through proctoscopy.
(if it is after injection sclerotherapy, it usually resolves spontaneously.
 5. If pelvi-rectal → transrectal drainage.
 6. With a finger in the anorectum, careful curettage of the walls of the abscess to avoid iatrogenic fistula formation.
- The wound is packed with daily dressings.

Treatment for the cause (associated fissure) → Lat. Sphincterotomy

Treatment for complication (fistula)

- Low fistula → Lay open fistulectomy.
- High fistula → 2 stages operation
 - 1st → lay open of lower part.
 - 2nd → lay open of upper part.

Self-assessment

Volume II

45. A 25 year old man presented to ER with 8 hours history of severe generalized abdominal pain

By history: he had a single attack of bleeding pre rectum this morning of fresh blood mixed with stool

He gave history of RHD with AF but not receiving any regular medications. On examination: temp 37.5 C, pulse 115 bpm, with irregular irregularity, generalized tenderness with absent intestinal sounds on abdominal examination. No masses in DRE but on withdrawal of finger, there was blood mixed with loose stool on glove

Questions

- 1- What is most likely diagnosis?
- 2- What are the main lines of management?
- 3- What is the prognosis of this case?

KEY POINTS

- 25 yrs ♂.
- Severe generalized abdominal pain.
- Acute onset.
- 8 hrs duration.
- B/R (blood mixed with stools).
- No fever, tachycardia & irregularities..
- Generalized tenderness.
- Abscent intestinal sounds.
- History of RHD with AF.

➤ **Causes of mesenteric vascular occlusion:**

1. Arterial embolism:
(sources: MS + AF, MI + Mural thrombus).
2. Arterial thrombosis: due to atherosclerosis (with history of intestinal angina).
3. Venous thrombosis:
 - Portal HTN.
 - Hypercoagulable state.
 - Intrapeeritoneal sepsis.
 - COC

Self-assessment

Volume II

Answers

1- This is a case of acute intestinal obstruction due to mesenteric ischemia most likely due to superior mesenteric artery embolism

- Intestinal obstruction
 - generalized abdominal pain
 - Absent intestinal sounds
- Superior mesenteric artery embolism:
 - bleeding per rectum
 - AF (irregularly irregular pulse): source of embolism
 - Generalized tenderness
 - Absent intestinal sounds (dynamic intestinal obstruction)
 - Tachycardia

2- Management:

A- Investigations:

1. For diagnosis:

- Mesenteric angiography or duplex scan:
 - Should be urgently done if possible to help establishing the diagnosis.
- Plain X-Ray:
 - Multiple fluid levels.
 - Late cases: intestinal necrosis (intraluminal & intramural gas).
- CT Scan:

2. For complications: *to assess the general condition of the patient*

- CBC: ↑ TLC
- KFTs: pre-renal failure.

3. For the cause e.g. ECG or echo, US (routine in cases of acute abdomen, serum amylase → pancreatitis)

to exclude pancreatitis e.g serum amylase

B- treatment

- 1- Preoperative preparation
- 2- Urgent operation

Self-assessment

Volume II

46. A 20 year old man presented to ER with 1 day history of abdominal pain that was vague and central in abdomen then localized in the right lower abdomen, he vomited once and was not able to take any food for the last 12 hours, he also has diarrhea with no bleeding per rectum. On examination: temp 37.9 C, pulse 100 bpm, BP 115/70 mmHg. There were tenderness, rebound tenderness and cross tenderness localized to right iliac fossa.

Questions

- 1- What is the most likely diagnosis?
- 2- How can you manage?

KEY POINTS

- 20 yrs ♂.
- Abdominal pain 1st generalized. Then, localized in Rt. Lower abd.
- Loss of appetite, nausea & vomiting.
- Diarrhea.
- T, R.T. & cross tenderness in Rt. Iliac fossa

➤ **Hint**

- May be presented by diarrhea as it touches the ileum.
- It is considered the most dangerous type:
 - No shift of pain → misdiagnosed as gastroenteritis.
 - No omental occlusion → peritonitis.
 - Affection of ileocecal vein → portal pyemia.
 - Affection of appendicular artery → gangrene.

Self-assessment

Volume II

Answers

1- The most likely diagnosis is acute appendicitis

- young adult
- Pain began central then localized to right iliac fossa (shifting of pain)
- Anorexia and nausea
- Slight fever 37,9 C
- Tenderness, rebound tenderness and crossed tenderness

2- Management

a- Investigations

*(It is a **clinical diagnosis** i.e. investigations are needed mainly to exclude other causes of acute abdomen)*

1. Laboratory:

1. Leucocytic count:

- Moderate leucocytosis (10,000 – 16,000/uI), However normal WBCs count does not rule out appendicitis.

2. Urine analysis: To exclude UTI or urinary stones.

3. Pregnancy test: If ectopic pregnancy is suspected.

2. Radiological:

U/S:

- May diagnose appendicitis in few cases.
- Exclude other diseases (Ureteric stones, Gynecological problems, etc.).

3. Instrumental:

Laparoscopy:

- Some surgeons have the policy to perform laparoscopy for females in the childbearing period with lower right abdominal pain.
- Advantages:
 - If the problem is medical (PID, Midovulatory pain); we protect the patients from hazards of surgery.

If the problem is surgical (Acute appendicitis, ovarian cyst); we can deal with it laparoscopical

b- treatment:

Urgent appendicectomy through grid Irion incision at point of maximum tenderness (mostly at McBurney's point)

Self-assessment

Volume II

47. Female patient 40 years old presented to outpatient clinic by 3 month history of bleeding per rectum together with lower abdominal pain, diarrhea and weight loss. By history: blood is bright red, small amount and mixed with stool. Pain was cramping, more on the left side. Diarrhea was six motions per day with blood and mucous in each motion. On examination: temperature was 37 C, pulse 95 pm, Bp: 130 / 75. Abdominal examination revealed no abnormality other than tender left iliac fossa on deep palpation. DRE: loose stool with blood and mucous but no masses. Colonoscopy was done and revealed hyperemic friable rectal and colonic mucosa up to 20 cm from anal verge and several biopsies were taken to histopathology

Questions

- 1- What is the most possible diagnosis?
- 2- What findings would be discovered on biopsy examination?
- 3- How can you manage?

KEY POINTS

- 40 yrs ♀.
- B/R of 3 ms duration (mixed with stools).
- Diarrhea with blood & mucous.
- Cramping abdominal pain.
- No fever.
- Tender Lt. iliac fossa.
- Colonoscopy → hyperemic friable rectal & colonic mucosa 20 cm from anal verge.

Self-assessment

Volume II

Answers

- 1- the most likely diagnosis is ulcerative colitis
 - Bleeding per rectum, abdominal pain and diarrhea for 3 months
 - Middle aged female
 - Friable rectal and colonic mucosa by colonoscopy
- 2- Histopathological findings in ulcerative colitis are:
 - The inflammation is confined to mucosa and submucosa (superficial).
 - Characteristic histological feature is: Crypt abscesses[□] with surrounding inflammation and pseudopolyps[□] (edematous mucosa surrounded by ulcers and they are highly precancerous and considered precancerous and considered an indicator of total proctocolectomy).
- 3- Management
 - a- Investigations:
 - 1- Laboratory:
 - CBC: anemia and leucocytosis in acute cases
 - Hypoproteinemia and hypokalemia in severe cases
 - 2- Radiological:
 - Barium enema
 - Colonic shortening
 - Pipe-stem appearance
 - B- Treatment
 - i. **Medical treatment:**
 - Rest, diet → ↑ protein, vit. & iron, low residue diet & Anti-Inflammatory drugs:
 - ii. **Surgical Treatment: (in about 20% of cases)**
 - **The need for surgical treatment is highest in 1st year following diagnosis)**
 - **Indications:**
 - Severe fulminating disease with failure of medical treatment
 - Chronic disabling disease with failure of medical treatment
 - Steroid dependant patients
 - Severe dysplasia on biopsy
 - Extra-intestinal manifestations not responding to conservative treatment
 - Rarely with complications: like hemorrhage and intestinal obstruction

Self-assessment

Volume II

48. A 50 year old female presented to you in outpatient clinic referred to dermatology outpatient clinic by pruritis and eczema of the Lt. nipple, she had no history of lactation, no previous breast masses, no family history of breast cancer. Examination revealed eroded Lt. nipple, no vesicles, no oozing, there was no breast masses on either side . No palpable axillary LNs

Questions

- 1- What is your most possible diagnosis?
- 2- What investigations would you recommend?
- 3- How can you manage this case?

KEY POINTS

- 50 yrs ♀.
- Pruritis & eczema of the Lt. nipple.
- Non-lactating & -ve breast mass.
- Eroded nipple.
- No vesicles or oozing.
- L.N. -ve.

Paget's disease	Benign eczema
- Unilateral. - Commonly at menopause. - Starts in the nipple. - Nipple is eroded. - No itching. - No vesicles not oozing. - No response to eczema TTT. - Well defined. - Breast lump may be felt.	- Commonly bilateral. - Commonly at lactation. - Starts in the areola. - Nipple is intact. - Itching. - Vesicles - oozing. - Responds to eczema TTT. - Ill defined. - No lump.

Self-assessment

Volume II

Answers

- 1- Most possible diagnosis is stage I cancer breast (Paget's disease)
 - Old age, no lactation, no vesicles, no oozing, unilateral
- 2- Investigations
 - a- To confirm diagnosis:
 - Core cutting biopsy will reveal Paget's cells
 - b- To assess spread and stage of tumor:
 - Mammography with complementary Ultrasound on both breasts
 - Metastatic workup: CXR, abdominal US, bone scan, brain CT
 - c- To assess general condition (preoperative): CBC, fasting and PP blood sugar, ECG, LFTs, KFTs
- 3- Treatment:
 - a- For the primary tumor:
 - Modified mastectomy (no conservative treatment in Paget's disease as the disease affects areola and nipple with their removal the advantage of good cosmetic appearance will be lost)
 - b- For the metastasis: (rare to metastasize)
 - Adjuvant irradiation and / or therapy according to site and number of metastasis and general condition of the patient
 - c- regular follow-up of the patient for early detection of metastasis
 - d- Prognosis: good prognosis

Self-assessment

Volume II

49. A 34 year old woman had right mastectomy and axillary clearance for a 4 cm carcinoma of right breast with unilateral enlarged fixed axillary LNs with no detection of distant metastasis.

Questions

- 1- What is the TNM staging system for cancer breast?**
- 2- Classify this patient according to TNM staging?**

Self-assessment

Volume II

Answers

- 1- TNM staging system is an international system aiming at staging of malignancies in general for deciding best treatment
For cancer breast: it is the most accurate staging system taking into consideration:
 - a- Primary tumor (T): discussing its size and local spread
 - b- Lymphatic spread: (N) discussing site and mobility of any affected LNs
 - c- Distant spread (: if there is distant non-lymphatic organs affected or not
- 2- This patient is staged ad T2N2Mo
 - T2 tumor 4 cm
 - N2 enlarged fixed axillary LN
 - M0 no detected distant metastasis

Self-assessment

Volume II

50. A 42 year old woman has had a core-cut biopsy for painless 5 cm right breast mass, the mass proved to be ductal carcinoma in situ.

Questions

Describe main lines of management of this case

Self-assessment

Volume II

Answers

This case should have simple mastectomy with sentinel LNs study, with primary reconstruction

- Simple mastectomy: as the tumor size is 5 cm (> 4 cm). So conservative surgery is contraindicated

NB. 4 cm is not an absolute measurement and the decision depends mainly on the relation between tumor size and breast size

- Sentinel LNs study: although the pathology proved that is is CIS, sentinel LNs study is recommended as there may be areas of invasive carcinoma skipped or missed by the pathologist. If there is any positive LNs axillary clearance will be done
- Primary construction: generally primary reconstruction is better than delayed

Reconstruction techniques:

- 1- Myo-cutaneous flaps
- 2- Prothesis and tissue expander



HINT:

In cases of CIS of breast, sentinel LN is recommended for fear of missed areas of invasive carcinoma

Self-assessment

Volume II

51. 30 year old presented by painless lump in left breast discovered accidentally during bathing, she is anxious during cancer possibility. No other masses noticed, no loss of weight, no skin changes, and no nipple discharge, she is in mid-menstrual cycle No history of breast feeding, she has a 3 year old child, irrelevant family history. On examination: non-tender 3 cm firm breast mass in upper lateral quadrant with no palpable axillary or supra-clavicular LNs, no skin changes, no expressible nipple discharge

Questions

- 1- What is your DD?
- 2- What is the most common?

KEY POINTS

- 30 yrs ♀. Non lactating.
- Painless lump in the Lt. breast.
- No general symptoms.
- No skin changes.
- No nipple discharge.
- – ve axillary L.N.
- – ve family history.
- Examination → 3 cm Lt. firm mass.

Self-assessment

Volume II

Answers

1- DD of this case: (try to mention what's with & what's against)

- i- Fibroadenoma (peri or intra-canalicular)
- ii- Traumatic fat necrosis
- iii- Chronic breast abscess
- iv- Ductasia
- v- Cancer breast

Other causes of breast lump:

- a. Acute breast abscess (pre-mammary, mammary, or retro-mammary)
- b. Fibroadenosis
- c. Tumors of skin and subcutaneous tissue
- d. Musculoskeletal swellings

2- the most likely diagnosis is intra-canalicular fibroadenoma

- 30 year old
- Painless, firm breast mass
- No manifestations of cancer breast
- No history suggestive of chronic breast abscess or traumatic fat necrosis

Self-assessment

Volume II

52. 14-year old male presented to ER by sudden severe right testicular pain for three hours with nausea and vomiting. Last year he has had similar attacks with spontaneous resolution in half an hour for each. On examination: temp 37.3 C, pulse 55 bpm, BP = 107/72 mmHg, normal left scrotum and testis. Right side examination showed swollen, extremely tender, transverse lying testis, erythematous scrotum and small hydrocele.

Questions

- 1- What is the diagnosis?
- 2- What diseases do you need to exclude?
- 3- What investigations would you request?
- 4- What options of treatment do you have?

Self-assessment

Volume II

Answers

- 1- This is a case of right-sided testicular torsion
 - 14 year old
 - Sudden severe of testicular pain
 - Past history of similar attacks
 - Swollen tender transversely lying testis with erythematous scrotum
- 2- Disease need to be excluded
 - 1) Epididymis: epididymitis (acute epididymorchitis).
 - 2) Testis: orchitis- Rupture testis.
 - 3) Cord: funiculitis – torsion.
 - 4) Tunica: pyocele – hematocele.
 - 5) Torsion one of testicular appendages e.g. hydatid of Morgagni.
- 3- Investigations
 - a. Doppler & Duplex scan: detect obstruction of blood flow in testicular vessels.
 - b. Urine analysis.
- 4- Treatment
 1. **Correct general condition.**
Then urgent operation:
 - a- In early cases:
 - Untwist the cord.
 - Orchiopexy to prevent recurrence.
 - Eversion of the tunica to prevent hydrocele formation.
 - b- In late cases (where the testis is gangrenous): orchiectomy
 2. **Orchiopexy of the other testis:**
 - As the anatomical cause of the torsion is likely to be bilateral.

Self-assessment

Volume II

53. A 37 year old female present with painless lump in the neck discovered accidentally in the size of a lemon
No other lumps were discovered. No recent weight loss, no change in bowel habits, appetite, temperature, tolerance, mood or sleep pattern. On examination: pulse 67 bpm, no special facies
3 X 4 cm neck swelling to the left of midline, firm, non-tender, moves up with deglutition but not on protrusion of tongue
No other swellings are palpable, no palpable LNs and no abnormalities on multi-system examination

Questions

- 1- What is the most possible anatomical diagnosis?
- 2- What is the differential anatomical diagnosis?
- 3- How can you assess the pathology of this condition?

KEY POINTS

- 37 yrs ♀.
- Painless lump in the neck.
- No general symptoms.
- No thyrotoxic symptoms.
- Pulse 67 bpm.
- No special facies.
- **Examination:** 3 x 4 cm to Lt. of midline:
 - Non tender.
 - Moves with deglutition.
 - No movement on tongue protrusion.

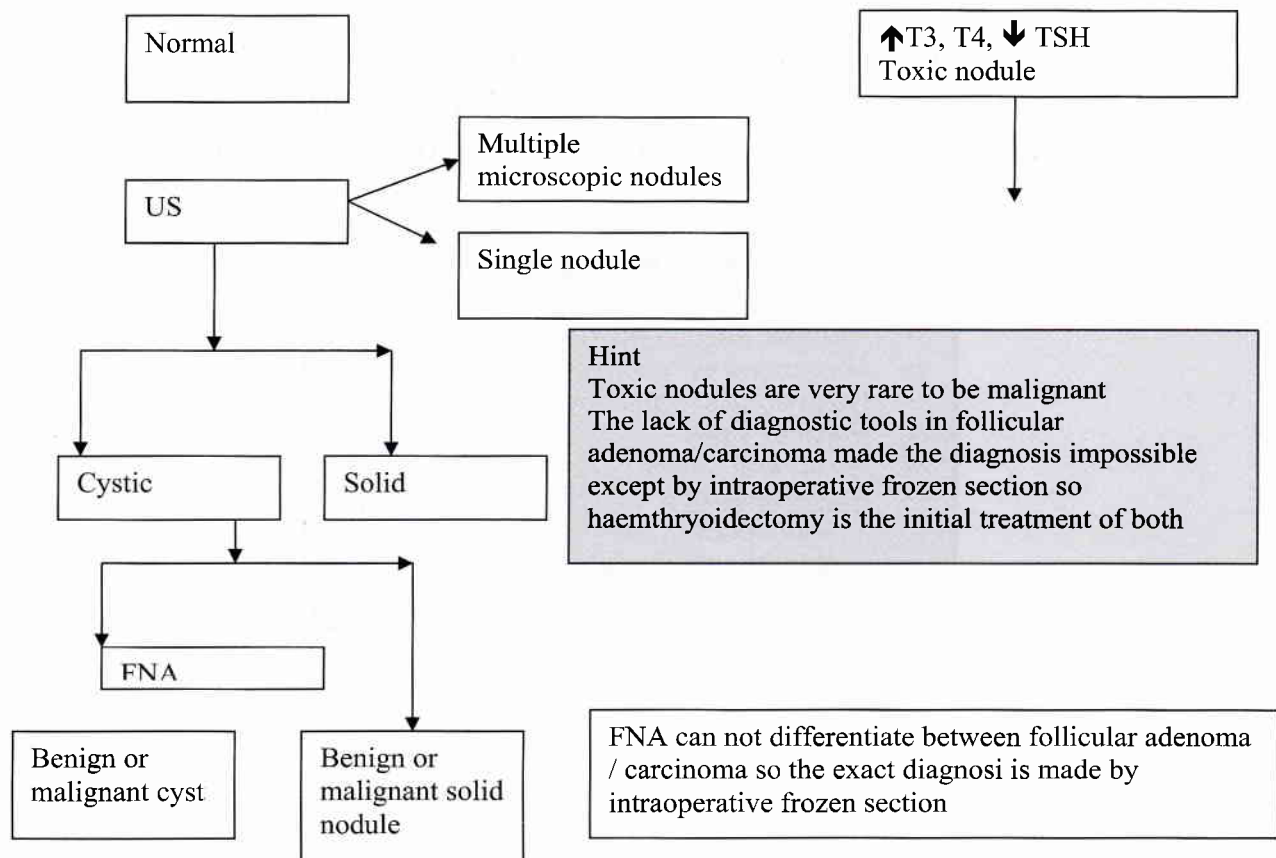
Self-assessment

Volume II

Answers

- 1- The most anatomical diagnosis is thyroid swelling
- 2- DD of masses in midline of the neck
 - a- Dermoid cyst
 - b- Subhyoid bursitis
 - c- Thyroglossal cyst
 - d- Thyroid swelling
- 3- Assessment of pathology of solitary thyroid nodule
 - a- Clinical: by mentioned history and examination, it is non-toxic, non malignant solitary thyroid nodule
 - b- Investigations: step by step investigations

T3, T4, TSH



Self-assessment

Volume II

54. A 45 year woman presents with neck swelling, 10 year duration
By history: she reported weight loss in last few months despite having increase appetite, also she feels hot and flushed in cold environment. On examination: pulse: 113 bpm. She is thin, irritable, and has a fine resting tumor. There is lid retraction, but no protrusion of eyes

Questions

- 1- What is the most likely full diagnosis?
- 2- What do you except on neck examination in this case?
- 3- What is the best treatment for this case? Why?

KEY POINTS

- 45 yrs ♀.
- Neck swelling of 10 years duration.
- Wt. loss despite normal appetite.
- Heat intolerance.
- Pulse 113 bpm.
- Thin & irritable.
- Fine tremors.
- Lid retraction.
- No true exophthalmos.

Self-assessment

Volume II

Answers

- 1- This is most likely a case of toxic nodular goiter
Or- a case of simple nodular goiter complicated by secondary thyrotoxicosis
 - 45 year old woman
 - Neck swelling for 10 years
 - Toxic manifestations for few months
 - False exophthalmos
- 2- Neck examination: in a case of nodular goiter would reveal:
 - by inspection: asymmetrical swelling in the lower part of front of neck moving up and down with deglutition
 - by palpation: non-tender, firm nodular swelling
 - Trachea and carotid may be displaced by huge goiter
- 3- Best treatment for this case is thyroidectomy (better total with replacement therapy) to avoid further complications

Self-assessment

Volume II

55. A 43 year old man presents with a slowly growing painless firm mass antero-inferior to the left ear, no LNs are palpable and facial movements are normal

Questions

- 1- What is most likely the diagnosis?
- 2- How can you manage this case?

➤ **D.D. of swelling in the parotid region:**

A. PARIETAL SWELLING:

▪ **Skin:**

- Sebaceous cyst.
- Abscess.
- Hemangioma.
- Hematoma.

▪ **Subcutaneous tissue:**

- Lipoma.
- Neurofibroma.
- Neurofibrosarcoma.

B. MUSCULOSKELETAL:

- **Muscular** → fibrosarcoma, masseter Ms. hypertrophy.
- **Bony** → Burkitt's lymphoma.

C. PRE-AURICULAR L.N. SWELLINGS:

- Lymphadenitis.
- Malignancy.

D. PAROTID GLAND:

1. **Inflammation:** - Acute (viral, bact.) - Chronic (TB, sarcoidosis).
2. **Autoimmune:** - Sjogren's S. - Benign lymphoepithelial lesion
3. **Tumors:**

Benign

- Pleomorphic adenoma.
- Adenolymphoma.
- Oncocytoma.
- Monomorphic adenoma.

Malignant

- Mucoepidermoid carcinoma.
- Adenoid cystic carcinoma.
- Acinic cell carcinoma.
- Carcinoma expleomorphic adenoma

Self-assessment

Volume II

Answers

- 1- The most likely diagnosis is: pleomorphic adenoma of left parotid gland
- 2- Management
 - a- Investigations:
 - i. To conform diagnosis
 - CT scan
 - Tc99 scan: cold spot
 - ii. Preoperative investigations:
 - FBC, ESR, KFTs, LFTs, CBC
 - b- Treatment:
 - If the tumor arises from superficial part of the gland → superficial conservative parotidectomy
 - If the tumor arises from deep part of the gland → total conservative parotidectomy

Self-assessment

Volume II

56. 68 year old man has undergone laprotomy, urgent resection of sigmoid and Hartman's pouch for perforated sigmoid volvulus and fecal peritonitis then admitted to ICU for ventilation

Questions

- 1- What is Hartmann's pouch? Why was it done for that patient?**
- 2- What options you have for nutrition of this patient? What are the routes of each?**

Self-assessment

Volume II

Answers

- 1- Hartman's pouch or procedure is a safe method for emergency removal of a diseased large bowel
- In this procedure, the distal part of the bowel is closed and left in the abdomen, while the proximal part is brought to the skin as a temporary stoma
 - In this patient, this procedure was done as an emergency setting with no time for bowel preparation

2- Options for feeding are:

	1- Enteral feeding	2- Parenteral feeding
Routes	Through GIT bleeding by a- Oral feeding b- Nasogastric tube c- Gastrostomy or jejunostomy in prolonged cases	a- Peripheral venous line b- Central venous line
Indications	The normal route of feeding indicated in all cases as long as the patient can ingest, propulse and digest and absorb food	Only when enteral feeding is impossible
Complications	Feeding tubes may be dislodged causing peritonitis or may be blocked	1- peripheral line → thrombophlebitis 2- Central line a- Complications of insertion → pneumothorax, Hge, nerve injury b- Sepsis 3- both can lead to serious electrolyte water and acid base imbalances
	Advantages if enteral over parenteral feeding a- Cheap b- Avoids complication of parenteral route c- Stimulates the bowel and prevents bacterial translocation	

This patient can not go with oral feeding as he is on ventilator, but can be fed enterally through tube feeding (according to his condition)
The presence of stoma with no anastomosis allows early enteral feeding

Self-assessment

Volume II

57. A 63 year old woman became confused 3 days after emergency repair of femoral hernia. She has one day history of abdominal pain, sudden onset and progressive course. The vomitus was mixed with blood in most of attacks. On examination: she is pale sweaty, blood pressure 90/60, pulse 115 bpm. Abdominal examination: showed tender epigastrium. DRE: nothing felt but there was tarry offensive stool on gloves

Questions

- 1- What is the most likely diagnosis?
- 2- How can you manage?

KEY POINTS

- 63 yrs ♀
- Femoral hernia repair 3 days ago.
- Severe abdominal pain.
- Acute onset & progressive course.
- Vomiting: bloody vomitus.
- Shocked patient.
- Tender epigastrium.
- Tarry offensive stools (melena).

➤ **Causes of acute peptic ulcer:**

1- Gastric irritants:

- Spices.
- NSAIDs.
- Reflux of bile from duodenum to stomach.

2- Stress ulcers:

- Cushing ulcer:
 - ↑ cortisone → muscle weakness.
 - Gastric mucosal ischemia.
- Curling's ulcer: in burns, toxins are excreted by liver in CBD.

3- May complicate uremia & portal HTN.

Self-assessment

Volume II

Answers

1- This patient has an upper GIT bleeding most likely from a peptic ulcer

- 3 days after emergency operation (stress ulcer)
- Abdominal pain, vomiting, hematemesis, epigastric tenderness, and melena
- Progressive into hypovolemic shock

2- Management

Hemorrhage is the only complication of peptic ulcer that should be medically treated

- a- resuscitation: 2 wide bore canulas, IV fluids, Ryle and gastric wash
- b- Urgent upper GI endoscopy to confirm diagnosis and also may aid in treatment (e.g. laser coagulation or thermal coagulation of bleeding site)
- c- IV proton pump inhibitor and local antacids
- d- IF all measures fail surgery is indicated
 - Gastric ulcer → partial gastrectomy
 - Duodenal ulcer → vagotomy and pyloroplasty with undermin sutures for hemostasis of bleeding site

Self-assessment

Volume II

58. 29 years old female presented to the hospital with labor pain, history and examination revealed that it is true labor pain.

Her husband reported that she has goitre and received medical treatment in the form of neomercazole and inderal in addition to folic acid, iron and other vitamins.

The labor was prolonged and the obstetricians said that this is case of obstructed labor and C.S is advised.

Questions

1. What do you expect about the cause of obstruction?
And how do you explain?
2. What was wrong in the drug treatment of this case?
3. Mention the prophylaxis against the occurrence of this complication?

Hint:

➤ **Thyrotoxicosis with pregnancy:**

1. Radioactive iodine is contraindicated, because it is teratogenic & will destroy fetal thyroid.
2. Antithyroid drugs should be used in minimum doses supported by β -blockers (propylthiouracil is the best).
3. In 3rd trimester:
 - Antithyroid drugs + small doses of L-thyroxine to suppress maternal TRF to avoid transmitted thiouracil goiter.

Self-assessment

Volume II

Answers

A1:

- The expected cause of obstruction is face presentation of the baby
- The explanation is the presence of transmitted thiouracil goitre as the mother received antithyroid drugs in the last trimester of pregnancy without small dose of L-thyroxine to suppress the mother TRF so mother TRF ↑ and cross placenta to the fetus → enlargement of thyroid of the baby → extension of the neck → face presentation

A2:

- The wrong in the drug treatment of this case:
 - a- She received neomercazole during pregnancy which should be replaced by propylthiouracil as it cross the placenta to less extent.
 - b- In the 3rd trimester small dose of L-thyroxine should be added to multithyroid drugs to suppress maternal TRF to avoid transmitted thiouracil goitre.

A3:

- The prophylaxis against the occurrence of this complication with fracture is:
 - Antithyroid drugs should be used in minimum doses supported by B-blockers
 - Antithyroid drugs which used is propylthiouracil
 - In 3rd trimester → antithyroid drugs + small dose of L-thyroxine to avoid transmitted thiouracil diotre.
 - If surgical treatment is indicated it is done in the 2nd trimester.

Self-assessment

Volume II

59. A 62 year old female presented with server abdominal pain started at epigastrium then became generalized. She was on NSAIDs for rheumatoid arthritis. On examination:

- General: pallor, sweating, rapid weak pulse.
- Local:
 - Inspection: board like rigidity.
 - Palpation: epigastric tenderness and rebound tenderness.
 - Percussion: ↓ liver dullness.
 - Auscultation: absent intestinal sounds.

Questions

- 1- What is your provisional diagnosis?
- 2- What is the investigation of choice? What does it show?
- 3- Do barium meal and endoscope have a role in this case? And why?
- 4- What is the incidence of this case?
- 5- What is the treatment of this case?

KEY POINTS

- 62 yrs ♀.
 - Severe epigastric pain.
→ generalized.
 - Shocked patient.
 - Rigidity, T. & R.T.
 - ↓ liver dullness on percussion.
 - ↓ intestinal sound
 - History of RA on NSAIDs.
- } **Generalized peritonitis**

Self-assessment

Volume II

Answers

A1:

- Most probably this is a case of peptic ulcer complicated by acute perforation.
- Due to:
 - **History:**
 - 62 years old female.
 - Patient is on NSAIDs for rheumatoid arthritis.
 - **Symptoms:**
 - Pain started in epigastrium then became generalized.
 - **Signs:**
 - General: pallor, sweating, rapid weak pulse.
 - Local:
 - Inspection: board like rigidity.
 - Palpation: epigastric tenderness and rebound tenderness.
 - Percussion: ↓ liver dullness.
 - Auscultation: absent intestinal
- **DD:**
 - Causes of upper abdominal pain:**
 - 1- Acute cholecystitis.
 - 2- Acute pancreatitis.
 - 3- MVO.
 - 4- Dissecting aortic aneurysm
 - 5- Inferior wall myocardial infarction.
 - 6- DKA.
 - From acute appendicitis:**
 - If it presents with Rt. iliac fossa pain.

A2:

- The investigations of choice is:
 - 1- Plain X-ray of chest and upper abdomen in erect position it will show free air under the diaphragm.
 - 2- U/S → fluid in peritoneum.
 - 3- Aspiration → bile stained alkaline fluid from peritoneum.

A3:

- **Barium meal:** have no role and contraindicated as if it is used it will cause → chemical peritonitis we use instead gastographin meal → ensure escape of the dye through the perforation
- **Endoscope:** difficult to diagnose perforation if small.

A4:

- The incidence of acute perforation of peptic ulcer:
 - 10 – 15% of peptic ulcer perforate
 - More common in DU 90%
 - More common in males
 - More common in anterior wall ulcer

Self-assessment

Volume II

A5:

(Urgent operation after good preparation)

1. Resuscitation & Monitoring:

a- Resuscitation:

- **Ryle:** continuous aspiration.
- **IV** (fluids, blood, antibiotics).
- **Catheter**

b- Monitoring: of BP, pulse, urine output, CVP, electrolytes and pH.

2. Emergency Operation:

⇒ ***Peritoneal toilet then according to condition of the patient:***

Bad general condition or late presentation (> 12 hr):

- 1- Simple closure of the perforation with omental patch (Graham's method) with postoperative anti ulcer TTT.
- 2- However, in GU, biopsy must be taken.
- 3- After closure follow up:
 - a) $\frac{1}{3}$ of patients → cured (no tt.)
 - b) $\frac{1}{3}$ → controlled medically.
 - c) $\frac{1}{3}$ → need definitive surgery.

Good general condition or early presentation (< 12 hr):



Definitive Surgery

1. DU → Vagotomy & drainage.
2. GU → partial gastrectomy.

⇒ ***Then draining of the peritoneum.***

3. Postoperative Care:

Medical treatment of the ulcer for patients who did not undergo definitive

Self-assessment

Volume II

60. A 30 years old male presented with long standing back pain. Plain X-ray showed ill-defined para-spinal soft tissue shadow with amalgamated inter-vertebral discs

Questions

- 1- What is your diagnosis?
- 2- What are other radiological investigations to be useful?
And why?
- 3- What is the D.D?
- 4- What are the complications of this case?
- 5- What are the treatment options?
- 6- What is the aim of your treatment

Self-assessment

Volume II

Answers

A 1

- **Diagnosis:**

Spinal tuberculosis (also known as Potts' abscess).

A 2:

- **Other investigations:**

-CT and MRI of the spine are useful in the investigation of cord compression.

A3:

- **Differential diagnosis:**

-Pyogenic spondylitis:

- Commonly Staphylococcus.
- Less commonly Escherichia coli, Salmonella, Brucella.

-Metastasis in the vertebrae (it affects the bone but does not affect the discs)

A 4:

Complications

1. Cold Abscess:

- **Early:** paravertebral & prespinal (dumple shaped).
- **Late:** along nerve roots – fascial planes → abscess at different regions e.g.
 - In cervical region: retropharyngeal abscess (Interferes with respiration & swallowing).
 - In thoracic region: parasternal & paravertebral abscess (along intercostal nerve).
 - In lumbar region: psoas abscess (along psoas sheath) (Passes under inguinal ligament with cross fluctuation).

2. TB Sinus:

- Due to faulty drainage of cold abscess.

3. Potts paraplegia (10% of cases):

- More with **peri-osteal type**.
- Usually in **upper dorsal spine**.
 - **Early (Reversible** on decompression) due to:
 - Compression of the cord by cold abscess.
 - Edema of cord.
 - Patchy meningitis.
 - **Late (Irreversible) due** to:
 - Angular kyphosis.
 - Thrombosis of anterior Spinal artery.

Self-assessment

Volume II

4. Deformity

- More with **osseous type** → Angular kyphosis.
- More marked in **thoracic** region.
 - As cervical and lumbar are normally lordotic.

A5:

General (Conservative Treatment)

- Sanatorial treatment.
- Anti-tuberculous drugs for 9 months.
 - Rifampicin + INH + Streptomycin (or Ethambutol) → for two months.
 - Rifampicin + INH → for rest of course.
- Early Paraplegia resolves in 60% of cases.

Local

- **Conservative** → Immobilization.
 - Cervical region → plastic collar.
 - Thoraco-lumbar region → Plaster jacket then corset.
- **Surgical drainage**
 - **Indication :**
 - Early paraplegia with no signs of recovery after 3 -4 weeks or worsens despite of conservative treatment.
 - Cold abscess.
 - **Aim :**
 - Rapid relief of condition by radical removal of all infected tissue with bone graft +/- internal fixation.
 - **Technique :**
 - Aspiration by Z technique.
 - Open drainage + bone graft → then close without drain.
 - i. Costotransversectomy (post approach) in the chest.
 - ii. Anterior approach in lumbar region.
- **Paralysis : Early : Extra-articular arthrodesis**
Late: Conservative management of bed-ridden patients

A 6:

- Treatment aims at:
 - To eradicate or at least arrest the disease process.
 - To prevent or correct deformity.
 - To prevent or treat the major complication – paraplegia.

Self-assessment

Volume II

61. Old woman presented with an intermittent and painless swelling under her jaw. She did the following investigation:



Questions

1. What does this X-ray show?
2. What is the diagnosis?
3. What other radiological investigations may be used to confirm the diagnosis?
4. What is the treatment?
5. Which three nerves must be preserved when surgery is undertaken for this condition?

Self-assessment

Volume II

Answers

A 1:

- The X-ray demonstrates well-defined moderately large calcific density projected under the body of the mandible.

A 2:

- **Diagnosis:** submandibular salivary gland stone.

A 3:

- **Other radiological investigations may be used to confirm the diagnosis are:**

- Occlusal film: may demonstrate a calculus in Wharton's duct.
- Submandibular sialogram.
- Radionuclide sialogram.

A 4:

- **Treatment:**

- Distal ductal calculi: removal of stone from Wharton's duct.
- For stones in the proximal part of the duct or hilum of the gland ± chronic sialadenitis: excision of the whole submandibular gland via an upper cervical skin crease incision.

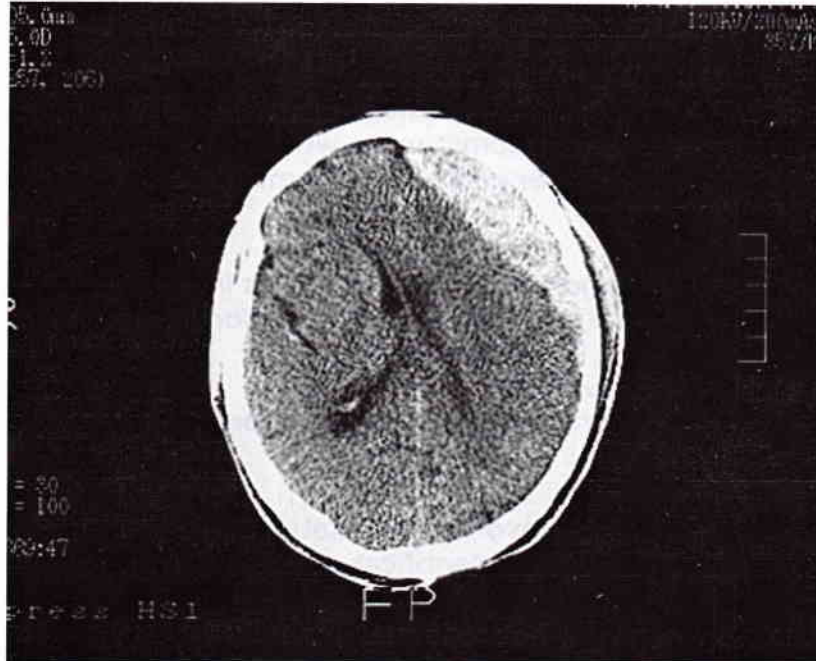
A 5:

- Nerves must be preserved when surgery is undertaken for these conditions are:
 - Hypoglossal nerve, lingual nerve and mandibular branch of the facial nerve must be preserved.

Self-assessment

Volume II

62. Old man presented to hospital following a road traffic accident with an altered state of consciousness. CT scan was done as follow:



Questions

1. What does this CT scan show?
2. What is the diagnosis?
3. What is the mechanism of injury?
4. How can you treat this condition?

Self-assessment

Volume II

Answers

A 1:

- There is a concavo-convex area (D – shaped area) of high attenuation overlying the left frontal lobe.

A 2:

- **Diagnosis:** acute subdural hemorrhage.
 - Note that in some circumstances when the subdural is large, it may take a convex appearance and mimic an acute extradural hematoma.

A 3:

- Acute subdural hemorrhage usually occurs in association with cortical laceration – most frequently anterior temporal or frontal regions:
 - Depressed fracture.
 - Tearing of bridging veins between the brain and the dura.

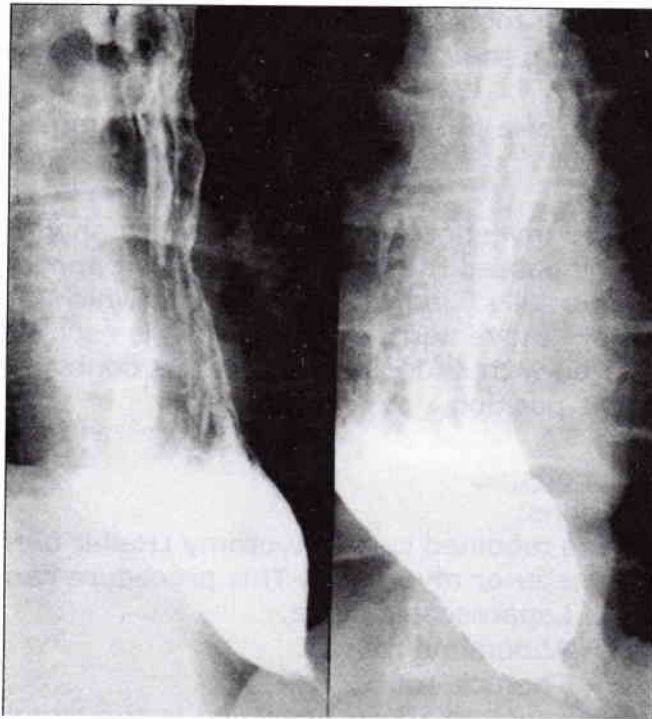
A 4:

- **Treatment:**
 - Surgical treatment involves evacuation of the clot through a large craniotomy, and identification and toilet to the damaged cortex.

Self-assessment

Volume II

63. A 30-year-old woman presented with a history of recurrent chest infections and dysphagia. The following investigation was done as follows:



Questions

1. What are the radiological features shown?
2. What is the diagnosis?
3. What might be the next non-radiological investigations? List the typical findings.
4. What are the treatment options?

Self-assessment

Volume II

Answers

A 1:

- This is a barium swallow that demonstrates a dilated esophagus containing
- a large amount of food residue. In addition, the distal aspect is tapered mimicking the classical 'bird's beak' appearance.

A 2:

- Diagnosis: achalasia of the esophagus (synonymous with cardiospasm).

A3:

- The next logical investigation would be an esophagoscopy: once the instrument has passed the cricoid cartilage, it appears to enter a gaping cave partially filled with dirty water, which laps to and fro with respiratory movement. Once the fluid is aspirated, the cardiac orifice is located with difficulty, owing to its contracted state and often eccentric position.

A 4:

- Treatment options:

- Operations:

Heller's modified cardiomyotomy (Heller performed anterior and posterior myotomy). This procedure can be done by:

- Laparoscopic route.
- Abdominal route.
- Thoracic route.

Sometimes the above operation is combined with an antireflux procedure if troublesome postoperative gastro-esophageal reflux is anticipated.

Balloon dilatation.

Self-assessment

Volume II

64. A child presents with a history of intermittent severe abdominal pain and vomiting. The following investigation was done:



Questions

1. What is the investigation and what are the findings?
2. What is the diagnosis?
3. What is the etiopathogenesis proposed for this condition?
4. What other modality of investigation is now routinely used to diagnose this condition?
5. What is the treatment?

Self-assessment

Volume II

Answers

A 1:

- This is a single-contrast barium enema demonstrating a smooth abrupt cut-off to the flow of barium at the hepatic flexure. The classical 'claw sign' is seen.

A 2:

- **Diagnosis:** ileocolic intussusception.

A 3:

▪ **Etiopathogenesis:**

- Idiopathic intussusception accounts for >95% of cases and occurs most often between 6 months and 2 years of age (75% of cases).
- Change in diet: when the infant is weaned.
- Intussusception usually begins in some part of the last 50 cm of the small intestine.
- Maximum aggregation of Peyer's patches is in the lower ileum.
- Seasonal incidents related to attacks of upper respiratory tract infection.

A 4:

- Ultrasound of the abdomen is now frequently performed to diagnose intussusception. A gastrograffin enema is also frequently employed.

A 5:

▪ **Treatment:**

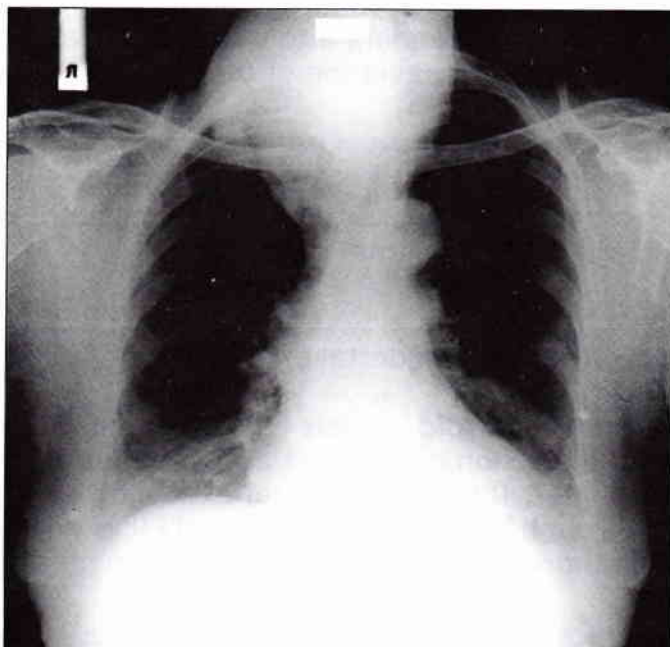
- Preliminary management: gastric aspiration and intravenous fluids.
- Reduction of the intussusception by hydrostatic pressure using saline or air.
- Operative reduction should be undertaken if hydrostatic reduction fails.

Bowel resection and anastomosis may be required if the intussusception cannot be reduced at surgery or if the viability is compromised.

Self-assessment

Volume II

65. A 65-year-old woman presented with a history of dysphagia. This plain X-ray was done:



Questions

1. What are the radiological features shown?
2. What is the diagnosis?
3. What other imaging modalities can be used to confirm the diagnosis?
4. What is the treatment?
5. What is the most significant complication following surgical treatment?

Self-assessment

Volume II

Answers

A 1:

- The chest X-ray demonstrates a large soft tissue mass arising in the superior mediastinum extending into the neck. In addition, there is significant narrowing and deviation of the trachea to the left.

A 2:

- **Diagnosis:** retrosternal goitre.

A 3:

- The goitre can be further evaluated using ultrasound; however, CT is advised to image its retrosternal extension.

A 4:

▪ **Treatment:**

- Surgical exploration is undertaken through a cervical incision.
- Once the inferior thyroid vessels have been controlled, the retrosternal extension can almost always be delivered through the thoracic inlet. If the retrosternal extension cannot be delivered through the incision, very rarely it is necessary to enlarge the thoracic inlet by a limited median sternotomy.

A 5:

- The most significant complication following surgery is recurrent laryngeal nerve palsy.

Self-assessment

Volume II

66. 45 years old woman undergoes an inguinal hernia repair, but in pre-operative assessment examination revealed excessive fat deposition around the nape of the neck with multiple striae across the abdomen. She takes no medication. Her blood pressure was 220/100 mmHg and her blood sugar was 300.

Questions

1. What is your clinical diagnosis?
2. What other information you search for in your examination?
3. How can you confirm the diagnosis?
4. What is the treatment of this case?

Self-assessment

Volume II

Answers

A 1:

- The case is suspicion of Cushing's syndrome because of presence of the following associate picture:
 - Hypertensive and diabetic patient.
 - Buffalo hump.
 - Abdominal striae.

A 2:

- Other information we search for in examination include:

I. Fat redistribution:

- Patients may have increased adipose tissue:
 - o in the face (**moon facies**)
 - o Upper back at the base of the neck (**buffalo hump**)
 - o Above the clavicles (**supraclavicular fat pads**).
- Trunkal obesity with pendulous abdomen
- Increased waist-to-hip ratio greater than 1 in men and 0.8 in women

II. Skin

- Facial plethora (red cheeks).
- Red striation, common over the abdomen, buttocks, back, upper thighs, upper arms, and breasts.
- Ecchymoses.
- Cutaneous atrophy and thinning of skin may be evident.
- Hirsutism and male pattern hair may be present in women.
- Increased facial hair.
- Poor wound healing.

III. Cardiovascular and renal

- Hypertension.
- Volume expansion with edema.

IV. GIT: Peptic ulceration

V. Endocrine

- Diabetes mellitus.(steroid induced)
- Hypothyroidism may occur from anterior pituitary tumors.
- Galactorrhea.
- Polyuria and nocturia from diabetes insipidus.
- Menstrual irregularities, amenorrhea, and infertility.
- Low testosterone levels in men → decreased testicular volume.

VI. Skeletal/muscular

- Proximal muscle weakness.
- Osteoporosis → fractures and kyphosis
- Bone pain.

Self-assessment

Volume II

A3:

↑ Urinary free cortisone
+
Early loss of circadian rhythm → Plasma cortisol level ← persistent elevation of cortisone

+
Low dexamethazone suppression test



Cushing's syndrome

ACTH test (or High dexamethazone suppression test)



> 3 folds

↓
Ectopic

< 3 folds

↓
Pituitary

- CT sella.
- MRI



Adrenal cause

- CT abdomen
- MRI.
- Selective adrenal venous sampling.

A4:

For pituitary tumors:

- 1- Trans-sphenoidal removal of the tumour (treatment of choice)
- 2- Hypophysectomy or pituitary irradiation followed by replacement therapy)

2- For adrenal tumors:

- 1- Surgical removal of the tumour.
- 2- This should be followed by suboptimal replacement therapy with low-dose steroids till the other atrophic adrenal gland recovers from suppression.

3- For paramalignant syndrome: treatment of the primary tumour if possible.

4- Medical therapy:

- Used to prepare patients before surgery or if surgery is contraindicated.
- Includes drugs that inhibit cortisol production e.g C metyrapone)

67. An adult male presented with anorexia, nausea, constipation with pain in the Rt. iliac fossa. On examination:

- General: there were fever, tachycardia.
- Local:
 - Abdominal movement with respiration.
 - Tenderness and rigidity at Mickle's point.
 - Intestinal movements.
 - +ve Rovsing's.

Patient was diagnosed as acute appendicitis and intra-operatively the surgeon found greenish fluid in the peritoneum.

Questions

- 1- What is the correct diagnosis of this case?
- 2- What is the explanation of this case?
- 3- What should you do in this condition?

Self-assessment

Volume II

Answers

1. This is a case of perforated duodenal ulcer.
2. The fluid from perforated DU runs on the paracolic gutter giving a picture simulating appendicitis.
3. Put a drain in the wound of appendectomy.

Exploratory midline laparotomy to deal with the ulcer.

- Peritoneal toilet then according to condition of the patient:

Bad general condition or late presentation

(> 12 hr):

- 1- Simple closure of the perforation with omental patch (Graham's method) with postoperative antiulcer TTT.
- 2- However, in GU, biopsy must be taken.
- 3- After closure follow up:
 - d) $\frac{1}{3}$ of patients → cured (no ttt.)
 - e) $\frac{1}{3}$ → controlled medically.
 - f) $\frac{1}{3}$ → need definitive surgery.

Good general condition or early presentation (< 12 hr):



Definitive Surgery

3. DU → Vagotomy & drainage.
4. GU → partial gastrectomy.

- **Then draining of the peritoneum.**

Self-assessment

Volume II

68. An 83 year-old man with a mass in the left flank presents with swelling and discomfort in the left testis, which does not resolve on lying down or elevation, The most possible clinical diagnosis is:

- A. Epidiymyorchitis
- B. 2ry varicocele
- C. 1ry varicocele
- D. Vaginal hydrocele

Answer: b

Self-assessment

Volume II

69. A 30 year old patient underwent a major abdominal surgery. On his 7th postoperative day he developed ileo-femoral deep venous thrombosis. His limb was swollen. Which of the following lines of treatment is the most appropriate?

- A. Venous thrombectomy
- B. Anticoagulation with heparin
- C. Thrombolytic therapy with tissue plasminogen activator
- D. Bed rest and elevation only

Answer: b

Self-assessment

Volume II

70. A 68 year old man on long term warfarin therapy for atrial fibrillation is admitted to the ward 48 hour prior to TURP. He complains of minor gingival bleeding. His INR was 5. The most appropriate treatment is:

- A. Parental vitamin K
- B. Fresh frozen plasma
- C. Protamin sulfate
- D. Fresh blood transfusion

Answer: A

Self-assessment

Volume II

71. A 78 yrs old female with known gallstones for several years presents with central colicky abdominal pain & vomiting. She has been constipated for the past few days. Clinical examination reveals a distended abdomen with increased bowel sounds. The most probable diagnosis is:

- A. Pancreatitis
- B. Acute cholecystitis
- C. Biliary colic
- D. Gallstone ileus

Answer: D

Self-assessment

Volume II

72. In a 30 yrs old female, during laparoscopic cholecystectomy, the surgeon noticed that the under surface of the liver has several lesions which are blue in color

The most probable diagnosis is:

- A. Hepatic adenoma
- B. Secondary liver metastasis
- C. Hemangioma
- D. Hepatocellular carcinoma

Answer: C

Self-assessment

Volume II

73. A 55 yr old man complains of intermittent jaundice associated with itching. This is associated with anorexia, wt. loss & upper abdominal discomfort. On examination he was anemic, has scratch marks over his body, slightly jaundiced & the gall bladder was palpable.

The most probable diagnosis is:

- A. Carcinoma of the head of pancreas
- B. Acute pancreatitis
- C. Chronic pancreatitis
- D. Periapillary carcinoma

Answer: D

Self-assessment

Volume II

74. 18 yrs old female complains of generalized colicky abdominal pain for about 6 hrs, she feels unwell, has vomited a couple of times & is anorexic. The pain has shifted to the RT. iliac fossa. On examination she has pyrexia of 38°C, tenderness & rebound tenderness over the Rt. iliac fossa with rigidity. The most probable diagnosis is:

- A. Mittelschmerz
- B. Right ureteric colic
- C. Acute appendicitis
- D. Carcinoma of the caecum
- E. None of the above

Answer: C